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University of the Philippines Diliman

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Bouncing Back and Moving Forward

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Preface

These proceedings gather the work of the contributors to the 1st International Conference on Entrepreneurship and Small and Medium Enterprise Development (ICESMED 2023), organized by the University of the Philippines Institute for Small-Scale Industries (UP ISSI) and held on 28 and 29 November 2023 at Malcolm Hall of the UP College of Law and at the Institute for Small-Scale Industries, UP Diliman, Quezon City.

The conference took as its theme "Resilience and Relentlessness: Bouncing Back and Leaping Forward." We chose those two words deliberately. Resilience described what the micro, small, and medium enterprise sector had already done: absorbed the shock of a pandemic, improvised, and survived. Relentlessness described what still had to be done. Recovery is not the same as development, and returning to where the sector stood before 2020 was never the point. The papers in this volume were written by researchers who take that distinction seriously.

ICESMED was conceived to give academics, researchers, extension officers, practitioners, and postgraduate students a venue in which to present work that advances new knowledge in entrepreneurship and SME development, to have that work sharpened by expert and peer commentary, and to place it in the public research domain where it can inform policy. The papers collected here reflect the breadth of that mandate. They examine entrepreneurial behavior and intention; MSME policy and its implementation; disaster risk reduction, the COVID-19 experience, and business continuity planning; entrepreneurship education; technology adoption and digital entrepreneurship; enterprise development and the Sustainable Development Goals; and inclusive entrepreneurship.

The conference opened with a keynote address from Dr. Eing Ming Wu, Executive Director of the Edu-Connect Southeast Asia Association and Professor at Shu Te University, who is also a Visiting Professor at the UP National College of Public Administration and Governance. A second keynote was delivered by Dr. Vanita Yadav, whose research on sustainability-driven entrepreneurship, innovation, and multi-stakeholder governance brings an international comparative perspective to the questions our region is asking. We are grateful to both for the generosity with which they engaged our participants.

ICESMED 2023 drew 101 abstract submissions. Every abstract was reviewed for relevance and rigor, and the authors of accepted abstracts were invited to submit full-length papers. Fifty-four papers were presented at the conference itself. Of these, 40 full papers were submitted for double-blind peer review by a panel of specialists, and 31 were revised and returned by their authors for publication in this volume. We record our thanks to the reviewers, who gave their time and judgment without recognition and whose work is the reason a volume of this kind can be trusted.

A conference is an act of collective labor. We thank the UP ISSI core team, whose members are named in the pages that follow, for carrying the work of organizing this event alongside their regular duties. We thank our sponsors — the UP Office of International Linkages, the UP Diliman Office of the Vice Chancellor for Research and Development, and the Office of Senator Sonny Angara — whose support made an international conference possible for an institute of our size. And we thank the presenters and participants, who traveled from across the Philippines and beyond to argue, question, and think together for two days.

The papers in this volume appear as their authors submitted them, following peer review and copy-editing. The views expressed are those of the authors and do not necessarily represent the position of UP ISSI or of the University of the Philippines. Responsibility for the accuracy of each contribution rests with its authors.

This was the first ICESMED. We hope it will not be the last, and we hope readers of this volume will find in it something worth building on.

Asst. Prof. Melanie M. Moraga-Leaño
Director, UP Institute for Small-Scale Industries
Co-Chair, ICESMED 2023

Ian Jester M. de Vera, DProf
Head, Research Division, UP Institute for Small-Scale Industries
Co-Chair, ICESMED 2023

University of the Philippines, Diliman, Quezon City
November 2023

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The 1st International Conference on Entrepreneurship and Small and Medium Enterprise Development was made possible through the generous support of the following institutions. The organizers gratefully acknowledge their contribution.

UP Office of International Linkages

For supporting the international dimension of the conference and enabling the participation of scholars and keynote speakers from outside the Philippines.

UP Diliman Office of the Vice Chancellor for Research and Development

For supporting the research and dissemination objectives of the conference and the publication of these proceedings.

Office of Senator Sonny Angara

For supporting the conduct of the conference and its aim of advancing MSME development in the Philippines through research.

The organizers also thank the UP College of Law for the use of Malcolm Hall, and the faculty, staff, and student assistants of UP ISSI whose work behind the scenes made the two days run.

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Conference Themes

Papers accepted to ICESMED 2023 and published in these proceedings fall under the following themes.

- Entrepreneurial Behavior
- MSME Policy
- Disaster Risk Reduction and Management, COVID-19, and Business Continuity Planning
- Entrepreneurship Education
- Inclusive Entrepreneurship
- Technology, Innovation and MSME Development
- Entrepreneurship, SME Development, and SDGs

Keynote Speakers



Dr. Eing Ming Wu

Executive Director, Edu-Connect Southeast Asia Association

Dr. Wu is the Executive Director of Edu-Connect Southeast Asia Association. He is a Professor at Shu Te University and a Visiting Professor at the UP National College of Public Administration and Governance (NCPAG).

Dr. Wu has a Doctor of Philosophy Degree in Public Administration from the University of Georgia, USA; a Master's Degree in Public Administration from California State University; and a Bachelor's of Law from National Ching Hsing University, Taipei, Taiwan.



Dr. Vanita Yadav

Senior Fellow, Urban Transformations Research Centre, and School of Business, Western Sydney University

Dr. Yadav is a Senior Fellow at the Urban Transformations Research Centre and a senior academic staff member in the School of Business at Western Sydney University, where she supervises doctoral candidates and teaches. Her expertise spans strategic management, innovation, entrepreneurship, business models, sustainability and governance, with a strong emphasis on transdisciplinary and impact-driven research.

She brings more than fourteen years of international academic and research experience across Australia, the United States and India. A Fulbright Fellow, she carried out research at the Massachusetts Institute of Technology on sustainability-driven entrepreneurship and innovation, and has been a Research Affiliate at the South Asia Institute, Harvard University.

Her research portfolio includes leadership of and collaboration on major interdisciplinary and international projects funded by, among others, the Australian Government, the United States Department of State and the Fulbright Foundation, India's Ministry of Rural Development, the Indian Council of Social Science Research, and the European Union.

Dr. Yadav has held substantial academic leadership roles, including Discipline Leader for Management and Innovation at the School of Business and Law, Central Queensland University, and, at the Institute of Rural Management Anand in India, founding leader of a Centre for Social Entrepreneurship and Chairperson of the Strategy and Policy area.

Her current work examines contemporary challenges at the intersection of business, innovation, governance and sustainable development, including international trade, agribusiness, multi-stakeholder governance of climate-related challenges such as urban heat and housing, and regenerative business models. She has produced over fifty scholarly outputs, including award-winning publications and Best Paper Awards, serves on editorial boards, and appears regularly as a keynote speaker and expert panelist at international forums.

Review Committee

ICESMED 2023 was fortunate to have the assistance of experts in the field who were willing to review papers. Care was taken to ensure that a fully double-blind peer review process was followed, and reviewers were not selected where they had a research or organizational connection to the author or authors.

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Karla Velas	Bureau of Internal Revenue (BIR), Philippines	*Group Supervisor / Revenue Officer*

ENTREPRENEURIAL BEHAVIOR

Millennial Entrepreneurs during the Pandemic: Quest Towards Marketing for Sustainability

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ABSTRACT

The role of millennial entrepreneurs in the success of small and medium enterprises in Metropolitan BLISTT cannot be overlooked. However, these entrepreneurs face marketing challenges that impede their productivity and competitiveness. This study aimed to identify new marketing strategies employed by millennial entrepreneurs to overcome the challenges of the 'new normal.' Using Interpretative Phenomenological Analysis, the study explored the experiences of millennial entrepreneurs in marketing their businesses during the pandemic. The study found that motivation for personal growth and development, motivation for improving entrepreneurial skills and strategies, and motivations for establishing a support system were the key motivational factors that played a significant role in the sustainability and drive of the participants to overcome marketing challenges during the pandemic. The challenges were classified into six categories: product, place, price, promotion, packaging, and positioning. Millennial entrepreneurs developed new marketing strategies, including product diversification, innovation, quality control, online presence, competitive pricing, social media promotion, and community building. These strategies aligned with the social dimension of marketing, which takes into account the needs of the society as a whole. This study provides valuable insights for aspiring millennial entrepreneurs, helping them to gain a clearer understanding of their intended market and make informed decisions about starting and growing their businesses. The findings also highlight the importance of commitment, creativity, and curiosity as crucial factors for success in marketing. Finally, this research contributes to the existing literature on the marketing challenges faced by SMEs in Metropolitan BLISTT, and provides a roadmap for future research in this area.

Keywords: Millennial Entrepreneurs, Motivational Factors, New Normal, Marketing Challenges, Marketing Strategies

1. INTRODUCTION

The global COVID-19 pandemic has brought about a dual crisis for entrepreneurs worldwide, encompassing both a widespread health emergency and an unparalleled global economic downturn. While the exact economic toll is hard to measure, the pandemic has undeniably caused a substantial negative impact on the global economy, with a projected 3.4% drop in the collective gross domestic product (GDP) in 2020, equivalent to a loss of over two trillion US dollars. The Philippines also suffered severely, experiencing its most significant annual GDP contraction on record in 2020, plummeting by 9.6%. This decline triggered declines in consumption, capital creation, and various sectors, prompting the government to institute strict lockdown measures and financial assistance programs. The resulting economic losses were compounded by decreased demand, trade, production, and consumer confidence.

Small and medium-sized enterprises (SMEs) in the Philippines have been unexpectedly challenged by shifts in consumption patterns, demand, distribution methods, and consumer behavior, resulting in lost access to consumers, supply chain disruptions, and reduced sales due to lockdowns and economic uncertainties. These MSMEs, though vital to the Philippine economy, often lack strategic marketing,

leading to challenges such as unclear product communication, pricing issues, and absence of marketing plans. Despite these hurdles, they are increasingly adopting new advertising methods, leveraging digital tools like smartphones, social media platforms, and apps such as Google Workspace, Canva, Shopee, and Facebook to enhance their digital presence, connect with customers, and innovate for sustained competitiveness.

Despite the prolonged pandemic, Philippine small and medium-sized enterprise (SME) owners are optimistic about local economic prospects, with intentions of expansion this year. Business Name Registration (BNR) data shows a significant increase in registrations in 2021 compared to 2019, and a Sun Life Business Growth and Resilience Index report indicates that 76% of SME owners foresee improved financial positions and 69% anticipate a better national economy. A substantial 86% of SMEs plan to grow, focusing on product extension (48%), digitalization (24%), new hiring (22%), and business acquisitions (20%). This underscores the role of digitalization and innovation as strategies for seizing opportunities in the 'new normal' brought on by the pandemic, which has prompted Philippine businesses to adapt through digital adoption, e-commerce, and online marketing. This adaptation reflects the transformative effects of the 'new normal' across business models, consumer behavior, and government support, propelling digital technology integration and shifts in consumer preferences, such as increased online shopping and contactless payments.

In Metropolitan BLISTT, the entrepreneurial landscape is flourishing, marked by an increasing number of millennial entrepreneurs launching businesses. This growth is supported by the relaxation of health restrictions and a rise in vaccinated individuals, leading to local businesses operating at full capacity. The Cordillera Administrative Region (CAR), including Metropolitan BLISTT, ranks as the second-fastest growing region in terms of recovery from the global pandemic, achieving a growth rate of 7.5%. However, while the region shows positive signs of economic recovery, millennial entrepreneurs in Metropolitan BLISTT still face challenges in crafting effective marketing strategies within the new normal. Government institutions have been active in aiding local small and medium-sized enterprises in their recovery efforts. The upsurge of millennial entrepreneurs in the region contributes to a thriving and dynamic business community, reflecting resilience amid pandemic challenges. Despite financial and marketing difficulties, these entrepreneurs exhibit a drive to innovate and succeed. The study aims to explore the experiences of millennial entrepreneur start-ups in Metropolitan BLISTT, particularly in navigating marketing challenges posed by the new normal, aiming to provide insights and recommendations for aspiring millennial entrepreneurs.

1.1 Literature Review

Marketing is the practice of targeting and engaging markets, encompassing the creation, communication, and delivery of value to customers, while sustainable marketing involves applying these principles to advance sustainability goals by promoting profitable, behavior-changing, and sustainable practices across consumers, businesses, and society. Achieving sustainability objectives relies on formulating effective marketing plans, drawing from market research and surveys, setting realistic goals, devising market-penetration strategies, and crafting marketing mixes that incorporate product, price, place, and promotion elements to effectively communicate and attract customers. Enhancing the promotion mix, which includes mass advertising, public relations, personal selling, promotional activities, and digital media, can aid in customer acquisition, retention, and brand advocacy. Small businesses should perceive marketing as both a technical and social process, taking into account supply and demand dynamics, emphasizing customer loyalty, and delivering exceptional service, considering the social dimension of marketing as a vehicle for exchange relationships between products and markets that addresses societal needs.

In the pursuit of customer satisfaction, aligning customer expectations with product performance is crucial, and understanding customer needs is achieved through thorough market research, emphasizing positive product experiences through marketing efforts. Providing an outstanding customer experience is an essential element of any marketing strategy, regardless of the business's scale, as customer loyalty shapes entrepreneurial success. Market segmentation, which groups consumers with similar needs and behaviors, is key to identifying specific consumer demands and guiding effective marketing strategies. Recognizing consumer satisfaction and perceptions is increasingly vital for businesses, while even dominant market players like SMEs in the Philippines must adopt effective marketing strategies.

Amid the COVID-19 pandemic, millennial entrepreneurs have brought significant changes to the marketing landscape in the Philippines, prompting rapid modifications in local businesses' marketing mix strategies. A marketing mix, as a crucial part of a comprehensive marketing plan, encompasses various business areas, commonly referred to as the 4 Ps: product, price, placement, and promotion, conceived by E. Jerome McCarthy in 1960. This framework has evolved to include additional elements like People for service businesses and, more recently, Physical and Process. The 'Product' entails creating offerings aligned with customer demands and differentiation from competitors, while 'Price' involves assessing cost-based pricing and perceived consumer value. 'Place' examines distribution channels, and 'Promotion' employs communication methods to entice consumers. Additionally, the marketing mix includes 'Packaging' and 'Positioning' for visual branding and strategic placement, respectively, and considers 'People' inside and outside the business responsible for sales, production, and marketing activities.

The pandemic-induced shift in consumer behavior has caught most Metropolitan BLISTT business owners off-guard, as people have adapted to 'low-touch' or 'no-touch' relationships, relying heavily on technology for communication due to the enforced isolation. Spending habits have changed, with a focus on online shopping for necessities, increased digital wellness demands, and more time spent on hobbies and leisure. This shift has prompted local businesses to transform their marketing mix to meet changing consumer needs and become 'Pandemic-Proof,' leveraging innovative products, services, and technology for customer engagement and adaptation. Despite the relatively limited research and development budgets, Micro, Small, and Medium Enterprises (MSMEs) in the Philippines have shown significant innovation, leading to the country's improved Global Innovation Index ranking. Digitalization and smart utilization of information and communication technologies are crucial for innovation, competitiveness, and resilience to supply and demand shocks for MSMEs.

The Millennial generation, born between 1981 and 1996, is characterized by its experience of significant technological advancements during childhood and adolescence, fostering adaptability and curiosity. This generation constitutes a substantial portion of the Philippine workforce, and Millennial Filipinos exhibit a higher level of optimism about the country's economic and sociopolitical future compared to their global counterparts. Deloitte's 2022 Millennial Survey reveals that more than half of Filipino millennials expect improvements in their country's overall situation, indicating a strong inclination toward entrepreneurship in the new normal.

Millennial entrepreneurs benefit from having more time for experimentation, learning, and growth, capitalizing on their familiarity with technology and the internet. Their exposure to these tools has equipped them with innovative approaches such as online businesses, franchising, and personal branding, contributing to their agility and competitiveness. In the Philippines, where millennial entrepreneurs play a crucial role in the government's efforts to develop micro, small, and medium enterprises (MSMEs), they are particularly well-suited due to the nation's status as the social media capital of the world. This technological proficiency enables them to master their trade, fostering a competitive, aggressive, and entrepreneurial mindset, especially in the evolving landscape of the new normal. Government initiatives, such as the Department of Trade and Industry's Youth Entrepreneurship Program (YEP!), are instrumental

in fostering the entrepreneurial skills of millennials. These programs offer comprehensive interventions, including training, mentorship, consultations with industry leaders, and knowledge sharing among peers, aiming to revolutionize the entrepreneurial ecosystem in the Philippines through the qualities exhibited by millennial entrepreneurs.

Millennial entrepreneurs are believed to excel due to their possession of three key traits: curiosity, creativity, and commitment. These traits, often referred to as the three Cs, are considered fundamental to entrepreneurial success according to Raine and Pandya (2019). Successful entrepreneurs are characterized by their curiosity to improve society, creativity in generating novel ideas, and unwavering commitment to their work. These foundational personality qualities lead to the core features of curiosity, creativity, and commitment, which in turn form the basis for achieving success in entrepreneurship. Curiosity drives innovation and the development of new methods, leading millennial entrepreneurs to offer fresh products and services. Creativity fosters inventiveness and market competitiveness, enabling the establishment of new businesses and improvement of existing goods. Commitment propels entrepreneurs to venture into the unknown, acquire knowledge and skills, and ultimately develop the confidence needed for success. It is the interplay between curiosity, creativity, and commitment that underpins the triumph of millennial entrepreneurs, shaping their path toward achieving remarkable ideas and becoming successful in the entrepreneurial landscape.

1.2 Theoretical Framework

This study investigates the effect of the global pandemic in the improvement and development of new marketing strategies of MBLISTT millennial entrepreneurs, as well as their motivations and drives and the ways in which they are revolutionizing the Marketing Mix model to make their businesses 'Pandemic Proof.' These theories serve as the foundation for analyzing the entrepreneurial experiences of millennial entrepreneurs. Data were collected through in-person interviews and participatory observation to capture firsthand the marketing strategies being implemented from the consumer's perspective. The collected data were further analyzed and interpreted through thematic analysis. Through this research process, the researcher explored the behavior and mentality of millennial entrepreneurs regarding their sources of motivation despite the unpredictable business environment, the decisiveness of retooling and innovating their marketing mix model, and the success stories and best marketing practices to be imparted to the next generation of entrepreneurs in Baguio and La Trinidad, Benguet.

Figure 1. Theoretical Framework (Input - Process - Output Model)

- INPUT: Sources of motivation of a millennial entrepreneur during the pandemic (Curiosity, Creativity, Commitment); Marketing Mix Model reassessment during the pandemic (Product, Price, Place, Promotion, Packaging, Positioning, People).
- PROCESS: Collection of data through Interviews and Participatory Observation; Analysis and interpretation of data through thematic analysis.
- OUTPUT: Presentation of Findings and Results; Development of the 'Metro BLISTT Marketing Mix Model for the New Normal.'

There is no doubt that millennial entrepreneurs possess the talents and attributes necessary to adapt to the new standard in light of the pandemic's massive impact on the marketing mix. In addition to their willingness to challenge the status quo, this generation's entrepreneurs are unquestionably willing to think outside the box. These millennials embrace innovation by having no qualms about abandoning conventional methods and attempting novel approaches. They never cease to learn, and as a result, they never cease to evolve their thinking and explore new means of reaching their objectives. This innovation

goes beyond products and services to encompass culture and working methods. Nonetheless, it is intriguing to explore the reasons behind the entrepreneurial drive of millennials. Therefore, the researcher was motivated to learn about the experiences of millennial entrepreneurs in Metropolitan BLISTT in overcoming the marketing challenges posed by the new normal, which will serve as a foundation for formulating recommendations for new and aspiring millennial entrepreneurs who wish to start businesses.

1.3 Significance of the Study

The increasing number of vaccinated individuals and the easing of health restrictions have led to a rise in small and medium-sized enterprises (SMEs) operating at full capacity in Metropolitan BLISTT. Millennial entrepreneurs, recognized for their problem-solving creativity, are playing a pivotal role in identifying unmet needs and swiftly bringing valuable products to market, contributing to the region's economic recovery. However, marketing challenges persist, hindering SMEs' productivity and competitiveness. As the number of millennial entrepreneurs continues to grow, their evolving business models and innovative marketing strategies are shaping the new normal landscape, showcasing their adaptability and resilience in responding to disruptions caused by the pandemic.

This study aims to uncover the novel marketing strategies employed by millennial entrepreneurs in Metropolitan BLISTT to overcome new normal challenges. The research holds significant promise for aspiring entrepreneurs, offering insights that can enhance their understanding of target markets, guide decisions about transforming passions into businesses, and clarify their goals and potential pathways. By adopting the marketing practices identified in this study, entrepreneurs can generate innovative products or services, fueling business expansion and market discovery post-pandemic. This has the potential to influence the broader entrepreneurial environment, leading to improved product diversity, competitive pricing, and ultimately contributing to economic growth and job creation.

The study's findings will benefit entrepreneurship educators by providing real-world insights to refine curricula, teaching methods, and lesson plans, ensuring alignment with current marketing techniques and entrepreneurial practices. Students can draw inspiration and best practices from this research, guiding their entrepreneurial aspirations and equipping them to navigate the evolving landscape of technology-driven businesses. Government agencies and institutions such as the Department of Trade and Industry and Benguet State University can leverage the study's outcomes to design effective programs and extension services that foster the skills of emerging entrepreneurs, contributing to economic recovery efforts and informed policy-making. Furthermore, this study holds potential for future business researchers to explore innovative marketing approaches, enhancing the understanding of entrepreneurship dynamics and opening avenues for region-specific studies across the Philippines.

1.4 Objectives of the Study

This study aims to examine the new marketing experiences of Metropolitan BLISTT millennial entrepreneurs in overcoming the challenges of the new normal. Specifically, this study addressed the following objectives:

1. To investigate the motivations driving millennial entrepreneurs in Metropolitan BLISTT to continue managing businesses amidst the challenges posed by the COVID-19 pandemic.

2. To identify and analyze the specific marketing challenges faced by millennial entrepreneurs in Metropolitan BLISTT as a result of the global COVID-19 pandemic.

3. To examine the marketing mix techniques adopted by millennial entrepreneurs in Metropolitan BLISTT to address and mitigate the challenges presented by the pandemic, proven to be effective both prior to and during the COVID-19 pandemic.

2. METHODOLOGY

2.1 Study Design

The study employed an Interpretative Phenomenological Analysis (IPA) design, enabling flexible interpretation and unveiling the lived experiences of entrepreneurs in a marketing management context. This qualitative approach aimed to provide a deep understanding by immersing the researcher in the phenomenon, and IPA allowed for close engagement with data to capture the actions and perspectives of youth entrepreneurs. Given the objective of comprehending marketing strategies employed by millennial entrepreneurs in the new normal, the qualitative design aligned with the study's interpretative ethos, distinguishing it from other research methods that yield unguided data. The research combined In-depth Interviewing and Participant Observation methods: interviews explored entrepreneurs' mindsets and strategies, allowing probing and follow-up questions, while participant observation involved observing real marketing practices and actions within their business operations, offering firsthand insights into marketing phenomena and the entrepreneurs' values.

2.2 Population of the Study

This study focuses on Millennial Entrepreneurs within the age range of 27 to 42, born between 1981 and 1996. The target population includes millennial entrepreneurs in Metropolitan Baguio City, La Trinidad, Itogon, Sablan, Tuba, and Tublay (BLISTT). Sixteen entrepreneurs from diverse industries and experience levels participated, hailing from different municipalities in metropolitan BLISTT. The distribution of participants reflects the population density, resource availability, consumer base, and business opportunities in each municipality, contributing to a comprehensive data collection.

> **Figure 2 & Figure 3. Participant Demographics Overview**
>
> • Location Distribution (Figure 2): Baguio City (31%), La Trinidad (38%), Tuba (13%), Sablan (6%), Itogon (6%), Tublay (6%).
> • Industry Breakdown (Figure 3): Accommodation and Food (31%), Manufacturing (31%), Wholesale & Retail (13%), Financial (6%), Others (19%).

To be included, establishments had to fall under the Micro, Small, and Medium Enterprise (MSME) category in the Philippines, defined by an asset size of up to Php 100 million and an employment size of fewer than 200 employees. Additionally, the businesses should have commenced operations during the new normal, post-2020. Participants were selected from five industry categories: wholesale and retail, accommodation and food, manufacturing, other services, and financial. Purposive sampling was employed, with snowball sampling extending the selection based on recommendations from participants, ultimately resulting in a varied group of millennial entrepreneurs from different sectors.

2.3 Data Gathering Tool

A semi-structured interview methodology was employed to collect qualitative data from the participating millennial entrepreneurs. This approach strikes a balance between structure and flexibility, allowing for a more insightful exploration of the entrepreneurs' activities, attitudes, and perspectives. The informal nature of the interview encouraged the entrepreneurs to share their experiences openly.

To guide the interviews and ensure alignment with the study's objectives, an interview guide with open-ended questions was developed. This guide facilitated meaningful discussions and comforted the participants in sharing their insights. Interviews were conducted with the participants' consent and availability, preferably within their business settings. Additionally, observation was conducted through field notes, providing a narrative and descriptive account of the real-time marketing strategies being implemented by the entrepreneurs, supplemented by photo documentation.

Prior to data collection, validity testing was carried out to ensure the tool's reliability and its ability to measure the intended aspects accurately. The ethical implications of the research involving human subjects were thoroughly reviewed to protect participants' rights and dignity. After obtaining approvals from relevant authorities, including the University of Baguio research ethics committee, data collection commenced with certified and validated tools, ensuring the accuracy and ethicality of the study.

2.4 Data Gathering Procedure

This study employed face-to-face in-depth interviews with millennial entrepreneurs in the MSME category within Metropolitan BLISTT. The interviews aimed to gather the entrepreneurs' insights regarding the marketing strategies they employed to overcome pandemic-related challenges in the market. The procedural steps undertaken were as follows:

- **Step 1 — Initial Contact:** Prospective participants were contacted online, informed about the study's objectives, and confirmed their willingness to participate. Recommendations for willing participants were sought from those who declined.
- **Step 2 — Scheduling:** After securing confirmation from interested participants, the researcher compiled a list of participants' contact information and availability. Interviews were scheduled at convenient times for participants, accommodating their work schedules and commitments.
- **Step 3 — Informed Consent:** Informed consent forms were presented to participants before interviews, outlining the study's nature, participant rights, and associated risks and benefits. Participants were given time to review and ask questions before signing the forms.
- **Step 4 — Equipment Setup:** Audio and video recordings were made during interviews with participants' permission. Recording equipment, including a mirrorless camera and external microphone, was prepared, tested, and backed up with power banks to ensure smooth interviews.
- **Step 5 — Interview Execution:** Semi-structured in-depth interviews were conducted with each participant. These interviews comprised three parts: the first assessing pre-pandemic marketing experiences, the second focusing on current strategies during the new normal, and the third combining insights from both prior interviews to describe essential marketing experiences amid the pandemic. A conversational approach created a relaxed and trusting atmosphere.
- **Step 6 — Environment Management:** Interview settings were chosen carefully to minimize background noise and distractions, promoting focused discussions. Some participants preferred alternative locations, like restaurants or cafes, which were accommodated while considering data quality. One participant was interviewed online due to geographic constraints, facilitated by appropriate technology.

- **Step 7 — Data Storage & Security:** Each interview file was assigned a code for organization, saved in a secure external SSD drive, and uploaded to a cloud storage for redundancy. Files were checked after each interview to ensure audio integrity.
- **Step 8 — Participatory Observation:** Following interviews, participatory observation occurred, where the researcher acted as a customer to experience the establishment's marketing environment, products, and services. Photos were taken to complement observation notes for additional data context.
- **Step 9 — Token of Appreciation:** Participants received a gift basket with various products from Benguet State University as a token of appreciation. This gesture aimed to foster positive relationships and potential future collaborations between the researcher and participants.

2.5 Treatment of Data

The information was examined using thematic analysis. NVIVO, an analysis tool, was utilized to process all the data. The qualitative data analysis software provided a structured and organized method of analysis. This allowed tracking and reviewing transcripts, as well as monitoring the progress of coding. Additionally, since all information was imported and stored in a single database, the software made it simple to obtain any required data. Additionally, it enabled better subgroup analysis and increased the overall efficiency of the research.

To analyze the data collected from the interviews, the researcher employed a deductive thematic analysis using a latent approach. A deductive approach involves developing a pre-existing theoretical framework or a set of predetermined concepts and using them as a basis for organizing and interpreting the data. In this study, the 7 Ps of marketing mix were used as the basis theory to generate themes from the participants. The latent approach to thematic analysis involved looking beyond the surface-level content of the data and identifying underlying meanings and concepts. This involved careful consideration of the context in which the data was collected, as well as the participants' cultural and social backgrounds. By identifying latent themes and patterns, the researcher was able to gain a deeper understanding of the participants' experiences and perspectives, and draw more meaningful conclusions from the data.

2.6 Ethical Considerations

All participating entrepreneurs in the research were fully informed about the study being conducted, from the purpose and objectives to methodologies and findings. They were provided with informed consent and were not forced to make decisions about whether to participate in the interview or not. If a participant became distressed in any manner during involvement, additional information was supplied. Information was collected through video and audio recording devices with the consent of the participant. The interview procedure could not begin without the full consent of the participating entrepreneur.

Participants were chosen solely on a voluntary basis and not on any other discriminatory criteria. They were allowed to withdraw at any moment without jeopardizing their participation in future studies or their relationship with the researcher and the university. No pressure was applied to entrepreneurs who did not wish to continue, and no explanation was sought.

Participating entrepreneurs were guaranteed safety during data collection, which was conducted while practicing minimal health protocols such as wearing masks and social distancing to avoid direct contact,

especially during the global pandemic. It was critical that the participating entrepreneurs were not harmed at any point during the study.

The information received from the entrepreneurs was kept strictly confidential, and only the researcher had access to it. The entrepreneurs' identities were kept anonymous and did not appear in any public reporting where privacy was requested. The significant results and outcomes of the study will be disseminated to the entrepreneurs who took part in the research to provide them with insight into the study's findings. Once the dissertation is completed and approved, a digital copy will be provided to the participants via email.

3. RESULTS AND DISCUSSIONS

This section presents the qualitative study's analysis and interpretation of millennial entrepreneurs' experiences during the pandemic, focusing on their pursuit of sustainable marketing strategies. The goal is to shed light on how the pandemic has impacted the marketing approaches of millennial entrepreneurs in Metropolitan BLISTT, revealing their adaptations and motivations within the changing business landscape. The research design involved semi-structured interviews with a diverse group of millennial entrepreneurs from various industries, followed by thematic analysis to identify key patterns and insights. Participatory observation was also used to validate respondents' statements, enhancing the credibility of findings.

Thematic analysis was employed to identify recurring patterns and themes among interview transcripts using NVIVO software. The systematic coding and analysis of data generated valuable insights that address the research questions. The outcomes of this analysis and interpretation contribute to the understanding of millennial entrepreneurship during the pandemic, benefiting educators, students, practitioners, policymakers, and researchers alike. These findings offer implications for comprehending the challenges and opportunities millennial entrepreneurs encounter in their marketing endeavors amid unprecedented circumstances, presenting a qualitative lens to explore this era of entrepreneurship.

Figure 4. Hierarchy Chart Overview

A hierarchy chart visually represents the frequency of coded references from interview transcripts of participating millennial entrepreneurs. This chart provides a quantitative perspective on the discussed themes, allowing for the identification of common trends and patterns in their experiences. The chart serves as a tool to uncover the most frequently mentioned themes, granting valuable insight into millennial entrepreneurs' challenges, perspectives, and experiences, thereby enriching the comprehension of their journey in the pandemic era.

3.1 Motivations of Millennial Entrepreneurs in Metropolitan BLISTT

The motivations and insights of the participants in the study reveal several key themes. The millennial entrepreneurs express diverse personal motivations for launching their businesses, including financial stability, practicality, inspiring others, family considerations, trust, and gratitude towards partners. Their narratives delve into various facets of business ownership, encompassing branding, marketing, packaging, time management, and family involvement. Despite acknowledging the challenges posed by factors like the pandemic, the entrepreneurs exhibit a strong sense of optimism about their business success, underpinned by confidence in their ability to attract and satisfy customers even amidst adversity.

The entrepreneurs underscore the crucial role of support from families, friends, and customers in propelling their businesses forward. They recognize that the entrepreneurial journey is demanding and often arduous, and the backing of loved ones and customers significantly contributes to their business

triumphs. A blend of formal education, self-guided learning, and participation in government programs for micro, small, and medium-sized enterprises (MSMEs) characterize the entrepreneurs' pursuit of business education and training. These entrepreneurs also view their enterprises as opportunities to make positive impacts within their communities, providing products and services that cater to customers' hobbies and mental well-being.

Moreover, these entrepreneurs have developed a range of strategic approaches to succeed in their ventures. They emphasize established routines and strategies to ensure efficient operations, as well as diversification of their business offerings to explore varied opportunities. They skillfully target niche markets, recognizing the potential of catering to specific customer needs. Creating and maintaining strong brand identities is another key aspect, reflecting their commitment to building a unique presence in the market. The entrepreneurs also display resourcefulness by optimizing their existing knowledge and resources to initiate their business endeavors. They are proactive in identifying market opportunities and are motivated by the prospect of sustainable income. Notably, some have even seized business opportunities amid challenges, like the pandemic, showcasing the adaptability and resilience characteristic of millennial entrepreneurs.

3.1.1 Motivation for Personal Growth & Development

At the core of every millennial entrepreneur in Metropolitan BLISTT lies a set of personal motivations that fuel their journey. These motivations serve as the driving force behind their pursuit of business ventures. Personal Interest & Passion act as a catalyst, igniting the millennial entrepreneur's enthusiasm and dedication. They are driven by a genuine interest in their chosen field, enabling them to channel their energy into their work. Additionally, entrepreneurs often face personal challenges along the way. Their ability to overcome these challenges is a testament to their resilience and determination. They are fueled by the desire to conquer obstacles and emerge stronger. Moreover, the pursuit of Opportunity Seeking and the Search for Sustainable Income further motivate millennial entrepreneurs. They have a keen eye for identifying promising opportunities in Metropolitan BLISTT and aligning them with their business goals, ensuring long-term financial stability. According to a report by the Global Entrepreneurship Monitor (GEM) on 'Entrepreneurial Attitudes, Aspirations and Activities of Individuals,' personal motivations such as a desire for independence, practicality, and a passion for their work are among the top reasons why people become entrepreneurs. In addition, a survey by Deloitte found that millennials are more likely than other generations to say that they started their own business because they wanted to be their own boss and to have a better source of income.

3.1.2 Motivation for Improving Entrepreneurial Skills and Strategies

Millennial entrepreneurs equip themselves with the necessary skills and strategies in order to achieve entrepreneurial success. Maintaining an Optimistic Mindset enables millennial entrepreneurs to weather the uncertainties and setbacks that come with building a business. They remain focused on their goals and maintain a positive outlook, which fuels their perseverance. Acquiring Business Education & Training provides millennial entrepreneurs with a solid foundation in various aspects of running a business. This knowledge equips them with the necessary tools to make informed decisions and navigate the complexities of entrepreneurship. Establishing a Routine is crucial for maintaining discipline and structure in their work. It allows entrepreneurs to manage their time efficiently and maximize productivity. Furthermore, diversification, niche targeting, branding, and market research are key strategies that millennial entrepreneurs employ to position themselves competitively in the market. By adapting to changing market dynamics, entrepreneurs increase their chances of success. Resourcefulness, another essential skill, enables entrepreneurs to find creative solutions to problems, make the most of available resources, and adapt to unexpected circumstances. According to a survey by the Ewing Marion Kauffman

Foundation, the top skills that entrepreneurs need to succeed include marketing, financial management, and strategic planning. In addition, a study published in the Journal of Business and Psychology found that entrepreneurs who receive training and support in business skills are more likely to achieve success.

3.1.3 Motivation for Establishing Support System

Millennial entrepreneurs do not exist in isolation. They rely on a support system to nurture their entrepreneurial journey. Support from family and friends plays a crucial role in providing emotional encouragement, guidance, and sometimes even financial assistance. These relationships offer a solid foundation of encouragement and belief in their abilities. Additionally, millennial entrepreneurs recognize the importance of giving back to their communities. Through Contribution to Community, they not only make a positive impact but also build valuable networks and goodwill. Community building is also important for millennial entrepreneurs. A study published in the Journal of Small Business Management found that social entrepreneurs, who aim to create positive social or environmental impact through their businesses, often start their ventures by identifying unmet needs in their communities. In addition, a report by the Kauffman Foundation on 'The New Entrepreneurial Growth Agenda' argues that entrepreneurs who focus on solving problems in their communities are more likely to succeed.

3.2 Marketing Challenges Encountered by Millennial Entrepreneurs during the COVID-19 Pandemic

The analysis of coding references unveils product challenges encountered by diverse businesses in their marketing efforts, yielding several prominent themes. Sourcing and delivery hurdles emerged as millennial entrepreneurs faced delays in receiving raw materials or products from various locations, exemplified by instances such as OLIZWELL's delayed deliveries from Vietnam and MOONSTONE's negotiation struggles for sauna delivery from Finland. Price fluctuations driven by economic changes further posed obstacles, impacting entrepreneurs like PINETHREE dealing with inflation-related material cost increases. The pandemic-induced limitations on movement profoundly affected businesses, particularly in the accommodation and food sector, as seen through DESFLEURS halting non-essential flower arrangements and KEOKI's adjustment to cater only to walk-in customers, further complicated by supply hoarding during lockdowns for BARTEAK. These challenges underscore the importance of robust supply chain management, operational flexibility, and adaptability to market shifts. Huang and Zhang (2020) emphasize the necessity for resilient supply chain practices in response to the pandemic's disruptions, emphasizing the significance of managing supply chain complexities and changes in customer demand.

The analysis of price challenges among millennial entrepreneurs reveals a key theme: Price Adjustment due to Inflation. This theme highlights that many young entrepreneurs have had to increase their prices because of inflation impacting the costs of raw materials, supplies, and ingredients. For instance, YAMASHITA raised its prices due to higher raw material costs, while BBREWS increased prices by around 10% due to the expensive nature of onions and other materials. Other businesses also adjusted prices due to inflation. The analysis underscores that inflation and raw material costs are the primary factors driving price increases. An article in the Journal of Business Research supports this, reporting that 40% of respondents attribute price increases to inflation, and 34% to raw material costs. The article also mentions other factors like increased transportation costs (13%) and higher labor costs (9%). In general, the article emphasizes that inflation and raw material costs are prevalent reasons for price hikes in businesses, particularly in the context of the COVID-19 pandemic.

The analysis of promotional challenges among millennial entrepreneurs reveals key themes. Firstly, there's a strong reliance on social media platforms like Facebook, Instagram, and TikTok for promotions due to their cost-effectiveness and broad reach. For instance, BARTEAK relies solely on social media for advertising. Secondly, some entrepreneurs lack major advertising strategies, possibly due to limited

resources or alternative preferences. BBREWS exemplifies this with no major advertising strategies in their plan. Thirdly, keeping up with consumer trends poses a challenge, implying a need for constant updating of promotional approaches. BALALONG struggles to align with current trends in advertising their product. In summary, these themes underscore challenges in millennial entrepreneurs' promotional strategies, emphasizing social media's central role, the absence of comprehensive advertising plans, and the struggle to stay current. A cited study on SMEs in the Western Cape Region highlights that while small businesses heavily rely on affordable social media for marketing, they often struggle to construct effective strategies to reach their intended audience.

The analysis of positioning challenges among millennial entrepreneurs reveals key themes. Firstly, the significance of establishing a strong online presence and visibility, though hindered by concerns about customer expectations versus actual experiences, as exemplified by ALLIZWELL's absence of online delivery. Secondly, challenges in accessibility and availability are prevalent, even among businesses located in commercial areas, often due to inadequate signage and disrupted supply chains, as seen with BBREWS' coffee shortage. Lastly, customer retention and attraction pose challenges due to reduced foot traffic and evolving demands, such as MOONSTONE's shifting demand post-restrictions. These challenges collectively underscore the need for millennial entrepreneurs to adapt, ensuring relevance and visibility by comprehending market preferences and needs, and crafting effective marketing strategies for targeted positioning.

The analysis of packaging challenges among millennial entrepreneurs leads to the emergence of two key themes. Firstly, the conflict between customer interest and packaging design is highlighted, with entrepreneurs noting that inadequate packaging design can deter interested customers from making purchases, emphasizing the need for improved packaging to enhance customer attraction and retention. For instance, ALLIZWELL faced issues with unappealing packaging design causing customer disinterest. Secondly, the struggle with branding is evident, indicating the necessity for millennial entrepreneurs to invest resources in building a robust brand identity for success, as demonstrated by SANAGI's iterative brand improvements. In conclusion, these themes underscore the pivotal role of packaging and branding in product success, urging entrepreneurs to craft appealing packaging, enhance marketing endeavors, and strengthen branding strategies. A study in the International Journal of Marketing Studies supports these insights, revealing packaging and branding as influential factors shaping consumer purchasing behavior by conveying product information and creating perceptions of quality and value.

3.3 Marketing Strategies Utilized by Millennial Entrepreneurs during the Global Pandemic

The study aimed to provide insight into how the participants were able to adapt to the unique challenges posed by the pandemic and continue to market their products and services effectively. Through the use of thematic analysis, it sheds light on the key strategies utilized and their impact on businesses. The following sections detail the results of the study and provide a discussion of their implications for millennial entrepreneurs, educators, students, policymakers, and business owners alike.

Marketing Mix Framework: Table 1 below outlines the MBLISTT Marketing Mix Model developed during the new normal, categorizing key strategic themes across the 7 Ps of marketing:

Marketing Mix Element	Identified Strategies & Themes
Product	Product Diversification, Innovation and Product Development, Focus on Quality Control, Providing Full Information
Place	Strategic Physical Location, Online Presence

Marketing Mix Element	Identified Strategies & Themes
Price	Maintaining Competitive Price, Gradual Price Increase, Balanced Pricing, Focus on Turnover, Layaway and Other Payment Schemes
Promotion	Social Media Promotion, Partnership and Collaboration, Clearances and Discounts, Social Events, Accreditation, Word of Mouth
Positioning	Market Delimitation, Interior Design and Aesthetics, Customer Satisfaction and Quality, Community Building, Networking and Continuous Learning
Packaging	Attractive Packaging Design, Packaging Customization, Brand Establishment, Focus on Product Information
People	Customer Engagement and Loyalty, Salesmanship, Employee Engagement and Satisfaction, Giving Back to the Community

Millennial entrepreneurs employ distinct product strategies, as evidenced by the data. Firstly, product diversification is a prevailing approach, where entrepreneurs expand their offerings with unique items like footwear, toys, local coffees, and cultural foods to attract a wider customer base. For instance, YAMASHITA, KEOKI, and BARTEAK introduced new product lines, and BGUNDAMS extended from model kits to anime figures. Secondly, innovation and continuous product development are emphasized, evident in entrepreneurs' adaptability to customer preferences and elimination of unpopular items. VALERIDES' plan for bicycle-guided tours showcases this innovation. Thirdly, quality control is a priority, with entrepreneurs like YAMASHITA focusing on consistent product quality and ISMAEL limiting clients to ensure superior financial service. These strategies collectively underline millennial entrepreneurs' pursuit of enhanced product offerings, quality, and competitiveness. A survey by America's SBDC and the Center for Generational Kinetics supports these findings, revealing millennial entrepreneurs' focus on innovation (52%) and quality (46%), with 62% regularly updating their offerings to match evolving customer preferences.

Millennial entrepreneurs employ distinct place strategies, as evident from the data. Firstly, they emphasize strategic physical locations, with KEOKI highlighting proximity to schools, PINETHREE enhancing visibility with signs, and ALLIZWELL and BARTEAK considering location changes and interior redesign. Secondly, online presence is crucial, with many entrepreneurs utilizing social media like Facebook, Instagram, and TikTok. DESFLEURS, Benguet Brews, JDR Home Fashion, and BGUNDAMS are examples of businesses actively engaging customers through online platforms, while others like BARTEAK and ALLIZWELL plan to establish Shopee and Lazada stores. YAMASHITA underscores social media's importance for MSMEs, citing its influence and customer engagement potential. In summary, millennial entrepreneurs' place strategies encompass strategic physical locations and robust online presence. A study in the International Journal of Economics, Commerce and Management supports this, revealing millennial entrepreneurs' dual focus on physical and online presence to attract foot traffic, enhance brand recognition, and leverage social media and online platforms for effective customer connection and business promotion.

Millennial entrepreneurs use diverse pricing strategies, as highlighted in the data. Firstly, the focus is on maintaining competitive prices while enhancing revenue, with YAMASHITA, BBREWS, SANAGI Farms, and KEOKI aiming for moderate price increases to stay competitive. Conversely, ALLIZWELL plans price reductions, and BGUNDAMS aims for maximum competitiveness. Secondly, gradual price increases due to

inflation are evident, as seen with MOONSTONE's positive response to incremental adjustments, and VALERIDES' cost-saving approach while offering fresh produce. Thirdly, balanced pricing is pursued by businesses like BARTEAK and DESFLEURS to cater to affordability for students and the middle class. Fourthly, emphasis on turnover is highlighted by PINETHREE, prioritizing higher turnover with lower markups to prevent spoilage. Fifthly, accessible payment schemes including lay-away and 'Paluwagan' are utilized by JDRHOMES and BGUNDAMS. Collectively, millennial entrepreneurs employ multifaceted pricing strategies, influenced by their goals and target markets.

Millennial entrepreneurs use a variety of promotion strategies, as observed in the data. Firstly, social media platforms like Facebook, Instagram, and TikTok are extensively used for product and service promotion, allowing for increased consumer reach and identification of new customers. Partnerships and collaborations with individuals and institutions within the industry are another avenue, effective in enhancing brand visibility and attracting potential customers. Clearances, discounts, freebies, and loyalty programs are utilized to attract customers, particularly during the pandemic's limited spending circumstances. Participation in or sponsorship of social events and engagement in corporate social responsibility activities are also evident, as is the value of accreditation and word of mouth recommendations. Overall, a mix of strategies, heavily reliant on social media, contributes to the success of attracting new customers and driving sales during the pandemic.

Millennial entrepreneurs employ key positioning strategies to establish their businesses. Firstly, they emphasize market delimitation, aiming to establish a strong local presence before expanding nationally. Secondly, creating visually appealing environments catering to the target audience's taste is crucial. Thirdly, maintaining quality and customer satisfaction is a priority, fostering loyalty and positive word-of-mouth. Lastly, community building and environmentally friendly approaches are significant, with a focus on livelihood and sustainability. Notably, networking and continuous learning are essential, as millennial entrepreneurs engage in organizations and programs to enhance their skills and grow. Studies confirm these strategies, with research showcasing millennial entrepreneurs' use of market delimitation for effective brand positioning, the role of aesthetics in brand experience creation, their prioritization of quality and customer relationships, and their emphasis on networking and continuous learning for growth and industry awareness.

Millennial entrepreneurs employ diverse packaging strategies. Firstly, they prioritize packaging attractiveness, seeking visually appealing and premium-quality designs to captivate customers. For instance, CHRISTARTS aims to enhance its packaging's visual appeal. Secondly, customization is highlighted, with some entrepreneurs using tailored packaging materials to protect products and reflect their value. DESFLEURS' custom-made boxes exemplify this approach. Thirdly, brand establishment is crucial, especially for service-oriented entrepreneurs. VALERIDES focuses on establishing her bike errands brand in Baguio while aiding the environment, while SANAGI underwent rebranding efforts for better promotion. ISMAEL emphasizes accreditation's advantage for packaging to attract clients. Lastly, product information clarity is emphasized, with millennial entrepreneurs stressing the need to comprehensively understand and effectively communicate product benefits to customers. BALALONG Farms illustrates this by strategizing human interaction to introduce unique products and explain their advantages.

And lastly, millennial entrepreneurs implement diverse people-focused strategies. Firstly, they prioritize customer engagement and loyalty by offering loyalty cards, freebies, discounts, and organizing events, fostering lasting relationships. Secondly, they employ effective salesmanship techniques by acquiring product knowledge, understanding customer interests, and building rapport. For instance, BGUNDAMS conducts research to connect with Japanese entertainment interests of customers. Thirdly, they focus on employee engagement and satisfaction, building personal relationships, ensuring financial well-being, and cultivating positive work environments. KEOKI's application of psychology principles exemplifies this

approach. Lastly, giving back to the community and supporting families is emphasized, as exemplified by SANAGI's efforts to sustain local communities through purchasing their by-products. These strategies collectively underscore millennial entrepreneurs' commitment to customer loyalty, sales enhancement, employee well-being, and community involvement.

4. CONCLUSIONS

- Millennial entrepreneurs' motivations during the pandemic can be categorized into three main areas: personal growth and development, improving entrepreneurial skills and strategies, and establishing a support system. These motivations are diverse and drive their business pursuits. Personal interests and passion fuel their enthusiasm, while overcoming challenges showcases their determination. Seeking opportunities for sustainable income is a driving force, as they adeptly identify prospects that align with their business goals. In the pursuit of entrepreneurial success, they prioritize skill enhancement and strategies, maintaining optimism, acquiring business education, and employing tactics like diversification and branding. Adaptability and resourcefulness are essential for handling unexpected situations. Recognizing the importance of support systems, millennial entrepreneurs rely on family and friends for emotional and sometimes financial backing. Community involvement is valued for its positive impact and networking potential, aligning with their focus on addressing community needs.
- Millennial entrepreneurs have successfully overcome marketing challenges brought by the pandemic by leveraging their sources of motivation. They were able to face various marketing challenges in today’s unpredictable business environment. These challenges were categorized into product, place, promotion, price, packaging, and positioning. Sourcing and delivery challenges, changes in price of raw materials, and health restrictions were some of the main product challenges. Location challenges included problems in visibility, physical structure, flooding and pollution, limited or no parking space, and no actual physical establishment. Price challenges included inflation and the need to adjust prices. Promotion challenges were mainly related to reliance on social media and difficulty in keeping up with fast-changing trends. Packaging problems involved the gap between customer interest and product design, as well as difficulty in establishing a brand. Lastly, positioning challenges included lack of visibility, online presence, physical presence, and the ability to retain and attract customers.
- By overcoming these challenges, the millennial entrepreneurs in Metropolitan BLISTT have developed a modern marketing mix, labeled the 'MBLISTT Marketing Mix for the New Normal.' This mix includes seven marketing areas—product, place, price, promotion, positioning, packaging, and people strategies—which emphasize the importance of customer satisfaction, quality control, innovation, and community building. Millennial entrepreneurs have become a strong business force during the pandemic, thanks to their commitment, creativity, and curiosity. Their strategies showcase a focus on building strong online and physical presences, maintaining competitive pricing, social media promotion, partnerships and collaborations, brand establishment, and customer engagement and loyalty.

5. RECOMMENDATIONS

Based on the study's conclusions, several recommendations can guide future and aspiring entrepreneurs, policymakers, educators, and business researchers toward entrepreneurial success:

- **For Aspiring and Emerging Entrepreneurs:** Recognizing the pivotal motivational factors of personal growth, skill enhancement, and establishing a support system should serve as a foundation for their journey. Entrepreneurs are advised to employ this framework to nurture commitment, stay optimistic, and continuously advance their skills, fostering creativity through innovation and staying updated with emerging techniques. By incorporating these motivational factors into their overall business strategy, entrepreneurs can take a holistic approach to building and growing their ventures.
- **Proactive Risk & Strategy Management:** Given the identified marketing challenges, entrepreneurs should embrace the ever-changing business landscape's uncertainties by preparing for potential changes and promptly adapting to new situations. Being aware of these challenges empowers entrepreneurs to proactively shape their marketing strategies, effectively addressing any challenges that arise in the future.
- **Utilization of the BLISTT Marketing Mix Framework:** Entrepreneurs can benefit from utilizing the Metropolitan BLISTT Marketing Mix in the New Normal as a roadmap for launching new businesses. This framework can ensure coordinated and effective marketing efforts, precisely targeting the new normal's unique challenges and opportunities. By considering this comprehensive approach, both new and established entrepreneurs can develop robust marketing plans attuned to the current business environment's demands.
- **For Policymakers & Government Agencies:** Policymakers should focus on cultivating a supportive business environment through policies that aid small businesses, offering skill development programs, enhancing accessibility to existing incentives, financing, and regulatory procedures, and promoting diversity by supporting underrepresented groups.
- **For Educators & Academic Institutions:** Educational institutions should prioritize equipping students with entrepreneurial skills, integrating practical business training into curricula, and providing mentorship programs in partnership with active industry leaders.
- **For Future Researchers:** Future business researchers should continue studying generational trends and evolving marketing practices, potentially extending research to different regional and cultural contexts across the Philippines for comparative analysis.

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Factors influencing entrepreneurial intentions among Computing and Information Science Students: A case study of Caraga State University, Philippines

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ABSTRACT

This study examined the factors that influence the entrepreneurial intentions of Computing and Information Science (CIS) students at Caraga State University (CSU) in the Philippines. Grounded in the Theory of Planned Behavior, the research investigated the impact of attitude towards entrepreneurship, self-efficacy, and subjective norms on students' intentions to pursue entrepreneurial ventures. The study employed a quantitative approach, utilizing questionnaires and structural equation modeling to analyze the relationships between these factors and their influence on students' entrepreneurship intentions. The findings of the study revealed significant positive relationships between attitudes toward entrepreneurship, self-efficacy, subjective norms, and students' intentions to engage in entrepreneurship. These results emphasize the importance of fostering a positive attitude, enhancing self-efficacy, and cultivating a supportive social environment in shaping students' entrepreneurial intentions. This research provides valuable insights for educators, administrators, and support organizations involved in entrepreneurship education. By understanding the factors that influence students' intentions to pursue entrepreneurial ventures, stakeholders can develop tailored interventions and educational strategies aimed at promoting entrepreneurship to students. The implications of this study extend beyond academia and have practical significance for policymakers and stakeholders in the field of entrepreneurship. By nurturing a positive attitude towards entrepreneurship, enhancing students' self-efficacy, and creating a supportive social environment, educational institutions and support organizations can play a pivotal role in fostering a culture of innovation, creativity, and entrepreneurship to students. This study contributes to the growing body of knowledge on entrepreneurship in the context of education. It underscores the importance of integrating entrepreneurial mindsets and skills into the curriculum to prepare students for entrepreneurship. The findings highlight the need for collaborative efforts between academia, industry, and government to create an ecosystem that supports and encourages entrepreneurial ventures.

Keywords: Entrepreneurship, Entrepreneurial Intentions, Theory of Planned Behavior, Attitude, Self-efficacy, Subjective Norms

1. INTRODUCTION

In the contemporary, dynamic world, the rise of innovative startups and technology-centric entrepreneurship has been recognized as a cornerstone for sustainable economic growth and development (Aspelund et al., 2005; Audretsch et al., 2006). Technopreneurship, an amalgam of technology and entrepreneurship, has emerged as a burgeoning field concentrated on creating new ventures based on avant-garde ideas and cutting-edge technologies (Davidsson, 2020; Ferreira et al., 2019). Technopreneurship education has been underscored as a pivotal catalyst for entrepreneurial success as it nurtures the development of creative thinking, innovation, and teamwork skills, all quintessential for technopreneurial ventures (Audretsch, 2014; Hashimi et al., 2021).

In the Philippines, the Commission on Higher Education (CHED) acknowledged the necessity of intertwining entrepreneurship with the fields of Information, Technology, and Engineering (ITE), thereby introducing Technopreneurship courses across ITE programs (Commission on Higher Education, 2016). State Universities and Colleges (SUCs) offering ITE programs are directed to incorporate Technopreneurship courses into their curricula to supplement technical skills with an entrepreneurial mindset. This academic environment catalyzes the fostering of an entrepreneurial mindset in students, stimulating innovative thinking with global implications while responding to local necessities (Fayolle & Gailly, 2015; Rauch & Hulsink, 2015).

To further stimulate technology entrepreneurship in the Philippines, the Department of Science and Technology (DOST), the Department of Information and Communications Technology (DICT), and the Department of Trade and Industry (DTI) have been directed to collaborate in establishing and nurturing a thriving startup ecosystem (Republic Act No. 11337, n.d.). Before this mandate, DOST was pivotal in creating Technology Business Incubators (TBIs) in state universities and colleges (SUCs). TBIs serve as catalysts assisting early-stage, technology-based entrepreneurial ventures or startups in overcoming obstacles and fast-tracking their path toward long-term viability and success (Aerts et al., 2007).

Caraga State University (CSU) in Butuan City, Caraga Region, Northern Mindanao, Philippines, is a leading public university with a satellite campus in Cabadbaran City. CSU is committed to cultivating globally competitive and socially responsible graduates who actively contribute to the sustainable and inclusive growth of the Caraga Region. CSU is the sole Level 4 State University and College (SUC) in the Caraga Region, one of only five Level 4 SUCs in Mindanao and among twenty Level 4 SUCs in the Philippines. CSU notably jumped from SUC Level 2 to SUC Level 4, a leap acknowledged by the recent SUC Levelling Report conducted by CHED. In 2021, the esteemed Quacquarelli Symonds (QS) Stars Team acknowledged CSU's quality by awarding it 3 QS stars (Dellosa et al., 2023).

CSU was among the early recipients of a TBI under the Innovation and Technopreneurship Hub (ITECH) Project of the Philippine Council for Industry, Energy, and Emerging Technologies Research and Development (PCIEERD) of the DOST. CSU branded its TBI 'Navigatu,' inspired by Butuan's rich history of the Balangay Boats - the oldest wooden watercraft discovered in the region that testifies to Butuan's extensive trading relationships across Southeast Asia as early as 700 AD (Dizon, 2011; Manguin, 1993). The TBI's primary goal was to lead innovation and entrepreneurial initiatives within the university, from fostering an innovation and entrepreneurship culture to connecting students, faculty, alumni, and industry professionals.

Despite including a Technopreneurship course and Navigatu's concerted efforts to stimulate entrepreneurship, a void remains in research on the determinants impacting students' inclination toward entrepreneurship. Gaining insight into these determinants is crucial for crafting successful strategies and interventions that encourage an entrepreneurial mindset among students and facilitate the birth of innovative startups (Krueger et al., 2000). Consequently, this study aims to delve into the factors affecting the entrepreneurial intentions of Computing and Information Science students at Caraga State University.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Theory of Planned Behavior

The Theory of Planned Behavior (TPB) is a model that establishes a connection between human beliefs and actions, proposed by Icek Ajzen as an enhancement to the predictive capability of the Theory of Reasoned Action (TRA). It often accurately predicts behavioral intentions based on attitudes towards the behavior, societal norms concerning the behavior, and perceived control over the behavior. Behavioral intention, an individual's preparedness to enact a specific behavior, is the direct precursor to that behavior (Ajzen, 2002). It is recognized as the most reliable predictor of behavior (Fishbein & Ajzen, 1975).

2.2 Entrepreneurial Intention

Entrepreneurship, viewed as a deliberate process occurring over time, typically begins with establishing intention, a significant precursor to entrepreneurial activities (Kyrö & Carrier, 2005; Lee & Wong, 2004). It is suggested that the environment and early life experiences, such as developing competencies like leadership, foster this intention (Obschonka et al., 2010). In this regard, educational institutions and faculty engaged in entrepreneurial activities significantly contribute to nurturing the entrepreneurial spirit among students through research-driven cultures and innovative programs (Carrier, 2005; Honig, 2004; Krueger et al., 2000; Kuratko, 2005; Liñán & Chen, 2009; Lüthje & Franke, 2003; Souitaris et al., 2007). However, Prodan and Drnovsek (2010) noted a gap in understanding the emergence of entrepreneurial intentions within academics, suggesting that evaluating these intentions could offer valuable insights into developing high-technology spin-off firms. Several determinants, including academic experience, patenting activity, and industry-specific research, influence the formation of these intentions and, consequently, new ventures (Grandi & Grimaldi, 2005; Landry et al., 2006). Factors such as an organization's innovative climate, incentives, rewards, and individual innovative orientation may foster entrepreneurial intentions, particularly in technology-based firms associated with economic growth (Lee et al., 2011). Entrepreneurial intentions also reflect an individual's willingness to perform entrepreneurial behavior, influenced by three primary motivational factors: attitude toward startups, subjective norms, and perceived behavioral control (Baron, 2004; Liñán, 2004; Liñán & Chen, 2009). These cognitive aspects contribute to understanding the intricacies of the entrepreneurial process.

2.3 Attitude Towards Entrepreneurship

Ajzen (1987) posits that an individual's attitude, or their perception of desire for a specific behavior, is influenced by personal expectations and beliefs (Husna et al., 2010). This perspective aligns with the Attitude Towards Entrepreneurship (ATE) concept, in which attitude is conceptualized as an individual's positive or negative evaluation of a given behavior, in this case, entrepreneurship (Ajzen, 1991). In essence, how a student perceives and feels about entrepreneurship reflects this concept (Liñán et al., 2011; Santos et al., 2016). The strength of the entrepreneurial attitude and subsequent entrepreneurial intention depends on the positivity of this perception (Kibler, 2013). Ajzen (1991) further illustrates that this intentionality towards a targeted behavior is rooted in the individual's underlying attitude and is predicated upon their perception of the behavior's attractiveness—both personally and socially—and

their belief in their potential success in the behavior, as found in the case of entrepreneurship (Ferreira et al., 2012). Hence, ATE significantly impacts Entrepreneurial Intention (EI), indicating a positive correlation between them (Liñán et al., 2011; Santos et al., 2016). Based on the given literature, the following hypothesis is proposed:

H1: Students' attitudes towards entrepreneurship significantly influence their entrepreneurial intentions.

2.4 Self-Efficacy

Bandura (1977) initially introduced the concept of self-efficacy as an individual's belief in their capacity to achieve desired outcomes. This idea was subsequently expanded upon in the entrepreneurial context by Boyd and Vozikis (1994), who conceptualized entrepreneurial self-efficacy as an individual's confidence in undertaking tasks within the entrepreneurial process. This concept was further articulated by Chen et al. (1998), who perceived it as individuals' faith in their skills throughout starting their venture. Self-efficacy has been acknowledged as a critical personal attribute in entrepreneurship research (Koçoğlu & Hassan, 2013). Entrepreneurial self-efficacy plays a pivotal role in the decision-making process of individuals considering entrepreneurship and in comprehending the process involved in initiating a new business venture (Boyd & Vozikis, 1994; Zhao et al., 2005). A wealth of studies indicate that entrepreneurial self-efficacy is a primary determinant of entrepreneurial intentions and attitudes (Boyd & Vozikis, 1994; Chen et al., 1998; Krueger & Brazeal, 1994; Zhao et al., 2005). Similarly, Kickul et al. (2009) acknowledge a robust body of evidence asserting a significant correlation between self-efficacy and intention. Drawing on the existing body of literature, the following hypothesis is postulated:

H2: Self-efficacy plays a significant role in shaping students' entrepreneurial intentions.

2.5 Subjective Norm

Subjective norm (SN) is a concept that measures the degree to which individuals perceive support or lack thereof from significant others—family, friends, or colleagues—for a specific behavior, such as entrepreneurial activities (Ajzen, 2001; Fishbein & Ajzen, 1975; Liñán & Chen, 2009). Essentially, SN encapsulates an individual's social pressure when deciding whether to pursue a behavior, often acting in a manner favored by those close to them (Ajzen, 1991). The correlation between SN and entrepreneurial intention (EI) has been extensively researched, yielding varied results. Mahmood et al. (2019) revealed a positive correlation between SN and pre-start-up behavior among low-income Asnaf millennials in Malaysia. In contrast, Zulfiqar et al. (2019) found a negative relationship with EI in a study investigating the influence of technological teaching methods on students' attitudes and intentions toward entrepreneurship in China and Pakistan. Contradictorily, several scholars reported an insignificant relationship between SN and EI (Doanh & Bernat, 2019; Karimi, 2020; Miralles et al., 2017), while a significant number of studies highlighted a positive, significant relationship (Ahmed et al., 2020; Al-Jubari, 2019; Al-Jubari et al., 2019; Farrukh et al., 2019; Feola et al., 2019; Ferri et al., 2019; Khan et al., 2019; Li et al., 2020; Mahmood et al., 2019; Shah et al., 2020; Shi et al., 2020; Trang & Doanh, 2019; Yarimoglu & Gunay, 2020). Drawing from the reviewed literature, the following hypothesis is put forth:

H3: Subjective norms significantly influence the development of students' entrepreneurial intention.

3. MATERIALS AND METHODS

3.1 Research Design

This study implemented a quantitative descriptive research methodology to gather and scrutinize data about the elements impacting the entrepreneurial intentions of Computing and Information Sciences (CIS)

students at CSU. The investigation evaluated the effects of attitudes toward entrepreneurship, subjective norms, and self-efficacy on entrepreneurial intentions. This was achieved by conducting a closely supervised survey utilizing Google Forms.

A bifurcated analytical procedure was carried out to establish correlations among the variables. Initially, the investigators employed Partial Least Squares Structural Equation Modeling (PLS-SEM) to validate the measurement model, enhancing the study's accuracy. This phase evaluated constructs' internal coherence and validity within the measurement model using benchmarks like Cronbach's alpha, composite reliability, and discriminant validity.

Subsequently, PLS-SEM analysis was used for hypothesis testing, permitting the simultaneous exploration of relations among the research variables. The structural model was appraised to pinpoint the specific influences of independent variables, such as the attitude towards entrepreneurship, subjective norms, and self-efficacy, on the dependent variable—entrepreneurial intention. This methodical process also facilitated interpreting relations among the variables, ultimately yielding a thorough comprehension of the factors affecting entrepreneurship intentions among CIS students at CSU.

[Figure 1. Research Model: Conceptual Framework linking Attitude towards Entrepreneurship, Subjective Norms, and Self-Efficacy to Entrepreneurial Intentions]

3.2 Research Sampling and Respondents

This research was concentrated on third- and fourth-year undergraduate students enrolled in the Computing and Information Sciences (CIS) program at Caraga State University who had completed courses in entrepreneurship. The target demographic included three distinct programs: Bachelor of Science in Computer Science (BSCS) with eighty-seven students, Bachelor of Science in Information Systems (BSIS) encompassing one hundred and fifty-three students, and Bachelor of Science in Information Technology (BSIT) totaling two hundred seventy-eight students.

The research team utilized a stratified random sampling method to secure a sample accurately representing the population. Under the stratified sampling framework, each department's sample size was ascertained. As a result, the study included thirty-four participants from the BSCS program, fifty-nine from the BSIS program, and one hundred seven from the BSIT program. Collectively, the research engaged two hundred CIS students.

Table 1. Respondents of the Study

Program	Population (N)	Respondents (n)
Bachelor of Science in Computer Science (BSCS)	87	34
Bachelor of Science in Information Systems (BSIS)	153	59
Bachelor of Science in Information Technology (BSIT)	278	107
Total	**N = 518**	**n = 200**

Source: CSU Information System

3.3 Data Collection

In this study, the researchers applied a 4-point Likert scale, providing critical benefits regarding effectiveness and data precision. Utilizing the 4-point Likert scale is advantageous as it intentionally omits a neutral or indecisive option. Such an omission encourages the respondents to present their genuine perspectives rather than resorting to a neutral stance, yielding more authentic and accurate data (Cummins & Gullone, 2000). This approach ensures that respondents articulate explicit attitudes toward each statement, enhancing the validity of the responses (Allen & Seaman, 2007).

In addition, the 4-point Likert scale presents an advantage in its simplicity and unambiguity. With fewer response options than other scales, it offers participants an easy-to-understand and intuitive approach (Bendig, 1954). The set of choices, consisting of 'strongly disagree,' 'disagree,' 'agree,' and 'strongly agree,' assists respondents in choosing the option most reflective of their viewpoint. This straightforward and uncomplicated structure mitigates confusion and indecisiveness, promoting a more efficient and dependable data collection process (Nunnally, 1978).

3.4 Reliability and Validity of the Measurement Model

The researchers conducted an exhaustive assessment of the measurement model's internal consistency using well-established methodologies, such as Cronbach's alpha and composite reliability. These methods offered crucial insights into the reliability and accuracy of the model's theoretical constructs in capturing the desired variables (Tavakol & Dennick, 2011).

In the context of Partial Least Squares Structural Equation Modeling (PLS-SEM), the reliability values for each indicator were diligently examined, ranging from 0 to 1, with larger values denoting higher reliability. In exploratory research, composite reliability or Cronbach's alpha values from 0.60 to 0.70 are deemed acceptable, while scores above 0.70 are favored for more advanced research. Nonetheless, it is crucial to remember that scores surpassing 0.95 are exceedingly high, indicating potential redundancy among items and should, therefore, be circumvented (Hair et al., 2010).

Along with internal consistency, the researchers underscored the necessity of appraising the discriminant validity within the measurement model. For this purpose, they adopted the widely accepted Fornell-Larcker criterion, which stipulates that a construct should share more variance with its respective indicators than any other construct in the model (Fornell & Larcker, 1981). This criterion is satisfied when each construct's square root of the average variance extracted (AVE) surpasses its correlation with any other construct.

3.5 Hypothesis Testing

The process of hypothesis testing was a pivotal component of this study, designed to scrutinize the interrelationships among the variables and verify the formulated hypotheses. The data was analyzed using quantitative methods to authenticate whether the observed interrelationships were genuine or occurred due to chance. The procedure encompassed several intertwined steps that enabled precise and dependable evaluations of the postulated hypotheses (Hakim, 2000).

An essential step was to estimate path coefficients using Partial Least Squares Structural Equation Modeling (PLS-SEM). These coefficients (β) signified the size and direction of the connections between the

independent and dependent variables, laying the groundwork for assessing the relationships between the study variables and testing the hypotheses (Hair et al., 2016).

To gauge the statistical significance of the path coefficients, the researchers employed the bootstrapping method to compute t-values and p-values. The t-values indicated the number of standard deviations a coefficient was estimated from zero, and p-values represented the probability of the observed relationship occurring by chance (Efron & Tibshirani, 1994).

Assessing statistical significance was accomplished by juxtaposing the computed t-values and p-values with predetermined thresholds (for instance, t-value > 1.96; p-value < 0.05). These thresholds helped determine whether substantial evidence exists to accept or reject a hypothesis (Mohapatra, 2019).

Finally, based on the path coefficients, t-values, and p-values, the researchers evaluated the outcomes of the hypotheses, determining the acceptance or rejection of each hypothesis in the study. The study assured precise, reliable, and valid insights into the factors affecting entrepreneurial intentions among CIS students at CSU through a meticulous process of data cleaning, model validation, discriminant validation, and robust hypothesis testing via PLS-SEM.

4. RESULTS

4.1 Analysis of Demographic Variables

The gathered data delineates a comprehensive demographic snapshot of the student population within the Computing and Information Sciences (CIS) program, highlighting critical trends in gender, age, and academic standing across three departments. The Bachelor of Science in Information Systems (BSIS) department boasts a higher proportion of females (55.93%) as compared to males (44.07%), with most students aged between 22–24 (52.54%). This is closely followed by the 19–21 age group (40.68%) and the 25–27 age group (5.08%). No students were found to be over 28 years of age. Regarding academic level, fourth-year students slightly outnumber third-year students (54.24% vs. 45.76%).

In contrast, the Bachelor of Science in Information Technology (BSIT) department is primarily male-dominated (62.65%) with the same prevalent age group of 22–24 (51.85%). However, the Bachelor of Science in Computer Science (BSCS) department reflects a nearly balanced gender distribution, with males slightly outnumbering females (52.94% vs. 47.06%). The age distribution mirrors that of the other departments, again dominated by the 22–24 age group (58.82%), and consistently, no students above 28 were observed. Across all departments, fourth-year students held the majority over third-year students, emphasizing uniformity in the distribution of academic years within the college. Hence, gender and age distributions exhibit some diversity across the departments, while academic standing remains consistent.

Table 2. Frequency Distribution of the Sample

Demographic Category	BSIS Freq	BSIS %	BSIT Freq	BSIT %	BSCS Freq	BSCS %
Gender: Male	26	44.07%	67	62.65%	18	52.94%
Gender: Female	33	55.93%	40	37.35%	16	47.06%

Age: 19–21	24	40.68%	48	44.44%	12	35.29%
Age: 22–24	31	52.54%	56	51.85%	20	58.82%
Age: 25–27	3	5.08%	3	2.78%	2	5.89%
Age: Above 28	0	0.00%	0	0.00%	0	0.00%
Year Level: 3rd Year	27	45.76%	44	41.08%	14	41.18%
Year Level: 4th Year	32	54.24%	63	58.92%	20	58.82%
Total	59	100.00%	107	100.00%	34	100.00%
Total Sample (N)	200	-	-	-	-	-

4.2 Measurement Model Assessment

Each item showcases factor loadings surpassing the recommended threshold of 0.70, affirming their reliable representation of the respective constructs. Moreover, all constructs register Cronbach's alpha and composite reliability values exceeding the acceptable benchmark of 0.70, underscoring their high internal consistency and reliability. Further, all constructs' Average Variance Extracted (AVE) values surpass the preferred limit of 0.50, confirming adequate convergent validity. These findings bolster confidence in the validity and reliability of the measurement model, thereby ensuring that the interplay among the constructs authentically mirrors the unique variance of each construct.

Table 3. Constructs, Item Loadings, Cronbach's Alpha, Composite Reliability, and AVE

Construct	Item / Loading	Cronbach's Alpha	Composite Reliability	AVE
Attitude Towards Entrepreneurship (ATE)	ATE1 (0.762)	0.904	0.926	0.676
	ATE2 (0.873)			
	ATE3 (0.816)			

	ATE4 (0.838)			
	ATE5 (0.756)			
	ATE6 (0.880)			
Entrepreneurial Intention (EI)	EI1 (0.694)	0.853	0.891	0.578
	EI2 (0.781)			
	EI3 (0.869)			
	EI4 (0.763)			
	EI5 (0.691)			
	EI6 (0.751)			
Self-Efficacy (SEF)	SEF1 (0.701)	0.809	0.859	0.506
	SEF2 (0.800)			
	SEF3 (0.702)			
	SEF4 (0.630)			
	SEF5 (0.665)			
	SEF6 (0.756)			
Subjective Norms (SNR)	SNR1 (0.701)	0.840	0.882	0.556
	SNR2 (0.809)			
	SNR3 (0.807)			
	SNR4 (0.704)			

	SNR5 (0.708)
	SNR6 (0.734)

The results of the Fornell-Larcker criterion established discriminant validity among the constructs. The diagonal elements show the square root of the average variance extracted (AVE) for each construct, whereas the off-diagonal elements show the correlations between the constructs. The results indicate that the square root of the AVE for each construct is greater than its correlations with any other construct, establishing discriminant validity.

Attitude towards Entrepreneurship (ATE), Entrepreneurial Intention (EI), Self-Efficacy (SEF), and Subjective Norms (SNR) are distinct from one another, demonstrating that the relationships between the constructs are not due to overlapping measures. Establishing discriminant validity ensures the accuracy and generalizability of the findings, providing confidence in the distinctiveness and interpretability of the research results.

Table 4. Discriminant Validity of Constructs (Fornell-Larcker Criterion)

Construct	ATE	EI	SEF	SNR
Attitude Towards Entrepreneurship (ATE)	0.822	-	-	-
Entrepreneurial Intention (EI)	0.583	0.760	-	-
Self-Efficacy (SEF)	0.273	0.419	0.711	-
Subjective Norms (SNR)	0.379	0.432	0.402	0.745

4.3 Structural Equation Model Assessment

The R-squared (R^2) value of 0.534 in the structural model demonstrates that 53.4% of the variance in individuals' intentions towards entrepreneurship can be explained by the three factors included in the model: attitude towards entrepreneurship, self-efficacy, and subjective norms. This is a substantive finding for the research as it highlights the collective significance of these psychological determinants in shaping an individual's intention to engage in entrepreneurial activities.

The hypothesis testing results indicate (see Figure 2 and Table 5) that all three hypotheses are supported. Firstly, the path coefficient from attitude towards entrepreneurship to entrepreneurial intention is 0.458, with a t-value of 5.858 and a significance level of $p < 0.001$. This confirms a highly significant positive relationship between attitude towards entrepreneurship and entrepreneurial intention. Secondly, the path coefficient from self-efficacy to entrepreneurial intention is 0.227, with a t-value of 2.684 and a significance level of $p < 0.01$, indicating a statistically significant positive relationship.

*[Figure 2. Structural Model Output: Path Coefficients (H1: 0.458***, H2: 0.227**, H3: 0.168**) and Explained Variance (R^2 = 0.534)]*

Finally, the path coefficient from subjective norms to entrepreneurial intention is 0.168, with a t-value of 2.596 and a significance level of $p < 0.01$, confirming a statistically significant positive relationship between subjective norms and intention towards entrepreneurship. Overall, 53.4% of the variance in Entrepreneurial Intention is explained by the three predictor variables included in the model.

In conclusion, the findings from the Structural Equation Model support all three hypotheses, demonstrating that Attitude Towards Entrepreneurship, Self-Efficacy, and Subjective Norms positively and significantly influence students' Entrepreneurial Intentions.

Table 5. Structural Equation Model: Hypothesis Testing Results

Hypothesis	Structural Relationship	Path Coeff. (β)	t-Value	p-Value	Result
H1	Attitude Towards Entrepreneurship -> Entrepreneurial Intention	0.458	5.858	p < 0.001	Supported
H2	Self-Efficacy -> Entrepreneurial Intention	0.227	2.684	p < 0.01	Supported
H3	Subjective Norms -> Entrepreneurial Intention	0.168	2.596	p < 0.01	Supported

5. DISCUSSION

This study identified a statistically significant positive relationship between attitude towards entrepreneurship and entrepreneurial intentions. This is congruent with prior research highlighting personal attitudes' pivotal role in shaping entrepreneurial intentions (Liñán & Fayolle, 2015; Lüthje & Franke, 2003). A positive predisposition towards entrepreneurship implies that students view entrepreneurship as a desirable career trajectory, increasing their propensity to embark on such ventures. This underscores the criticality of fostering a favorable attitude among students toward entrepreneurship.

Additionally, a substantial positive correlation was discerned between self-efficacy and entrepreneurial intention. This concurs with the empirical evidence presented by Zhao et al. (2005), which underscored the significant impact of self-efficacy on students' entrepreneurial inclinations. Self-efficacy, an individual's confidence in successfully performing entrepreneurial tasks, can be a critical determinant of their intentions to pursue technopreneurship. Enhanced self-efficacy will likely fortify students' belief in their potential to triumph as entrepreneurs, bolstering their entrepreneurial aspirations. Consequently, it

is imperative to cultivate students' self-efficacy within entrepreneurship education, given its potential to substantially affect their entrepreneurial dispositions.

Furthermore, a significant positive association was detected between subjective norms and entrepreneurial intention, corroborating Liñán and Fayolle's (2015) research, which pinpointed subjective norms as a decisive factor in shaping students' entrepreneurial intentions. Subjective norms embody the beliefs and expectations of influential figures (such as family, friends, and peers) and can significantly sway students' entrepreneurial intentions. These findings imply that students are more inclined to consider entrepreneurship a viable career if they perceive their significant others as supportive of such a pathway. This emphasizes the necessity of nurturing a supportive social milieu for budding entrepreneurs, as it can significantly mold their entrepreneurial intent.

In sum, the findings of this study offer invaluable insights into the determinants that influence entrepreneurial intentions among CIS students at Caraga State University. By underlining the crucial role of attitudes toward entrepreneurship, self-efficacy, and subjective norms in shaping students' entrepreneurial intentions, this study contributes to our understanding of students' entrepreneurial mindsets. Moreover, these insights can serve as a foundation for crafting effective strategies and interventions to encourage entrepreneurial intent among students.

5.1 Implications

5.1.1 Theoretical Implications

This scholarly inquiry advances the expanding compendium of literature on entrepreneurial intentions. It does so by probing the impact of attitudes toward entrepreneurship, self-efficacy, and subjective norms on the entrepreneurial aspirations of students studying Computing and Information Science at CSU. By utilizing Ajzen's Theory of Planned Behavior (1991) as its theoretical framework, the investigation provides instrumental insights into the correlations among these components and their collective influence on students' proclivity towards undertaking technology-driven entrepreneurial ventures.

In addition, the study augments existing literature by interrogating these relationships within a uniquely regional context (Wah et al., 2018). This provides a fresh vantage point that amplifies the understanding of entrepreneurial intentions within student demographics, offering a distinctive exploration angle. The conclusions drawn from this research underscore the significance of considering the multifaceted interplay of individual, societal, and contextual elements in molding students' entrepreneurial intentions (Liñán & Fayolle, 2015). Such an understanding could subsequently guide the creation of custom-made interventions and pedagogical approaches to invigorate the spirit of entrepreneurship among students.

5.2.2 Practical Implications

The results of this investigation possess multiple logical implications for educators, administrators, and backing organizations engaged in entrepreneurship education and assistance (Fatoki, 2018). Primarily, the study underscores the criticality of nurturing a favorable disposition towards entrepreneurship within the student community. Educators could weave in dynamic, immersive pedagogical methodologies that cultivate a positive outlook toward entrepreneurship as an appealing vocational trajectory (Lüthje & Franke, 2003). Implementing such methods may include case studies, guest lectures, and hands-on learning activities (Rideout & Gray, 2013), exposing students to successful entrepreneurial stories and ventures.

Secondarily, the study accentuates the necessity to build and augment students' self-efficacy within the scope of entrepreneurship education. Academic institutions have the potential to offer training sessions

and workshops to hone students' entrepreneurial proficiencies and expertise, including problem-solving, opportunity identification, and risk mitigation (Zhao et al., 2005). Institutions can amplify students' self-efficacy by equipping them with requisite instruments and resources and backing them to cultivate entrepreneurial capabilities, thereby escalating their propensity to adopt entrepreneurship (Bandura, 1977).

The study highlights the pertinence of cultivating a supportive social ecosystem for budding entrepreneurs. The influential role of family, friends, peers, and mentors in sculpting students' entrepreneurial intentions cannot be overstated (Liñán & Fayolle, 2015). Therefore, it is paramount to establish a supportive nexus that motivates and assists students in their entrepreneurial endeavors. Institutions can catalyze networking events, mentoring initiatives, and collaborative opportunities (Hatak & Snellman, 2017), thus empowering students to connect with congenial individuals, industry professionals, and triumphant technopreneurs.

5.3.3 Policy Implications

The outcomes of this research possess substantial policy implications for educational bodies, governmental entities, and auxiliary organizations involved in endorsing entrepreneurship within the region (Engle et al., 2010).

The investigation underscores the requirement for an exhaustive entrepreneurship education policy integrating key determinants shaping students' entrepreneurial ambitions. Policymakers could devise directives and frameworks to assimilate entrepreneurship courses and modules into the academic curriculum (Wah et al., 2018). The focal point of this endeavor should be cultivating entrepreneurial attitudes, self-efficacy, and reinforcing social networks among students.

Next, the study highlights the pivotal role of support organizations like Navigatu in nurturing an environment conducive to entrepreneurship. Policymakers are recommended to allocate resources and financing toward initiating and expanding technological business incubators, accelerators, and mentorship schemes. Such an approach provides budding entrepreneurs indispensable access to vital resources, networking platforms, and guidance.

Finally, the study stresses the significance of collaboration amongst educational institutions, governmental agencies, industry partners, and support organizations in bolstering regional entrepreneurship. Policymakers are advised to expedite partnerships and collaborative endeavors that foster stakeholder resource-sharing, knowledge, and expertise. This strategy will likely create a synergistic ecosystem that bolsters technology-centric startups' and student entrepreneurs' growth and maturation (Etzkowitz & Leydesdorff, 2000).

6. RECOMMENDATIONS

In light of the results of the present research, the ensuing recommendations are proposed for subsequent inquiries into entrepreneurial intentions within the context of educational institutions:

1. Exploration of Additional Factors: This research focused primarily on attitudes toward entrepreneurship, self-efficacy, and subjective norms as the primary determinants influencing students' entrepreneurial aspirations. It would be beneficial for future studies to probe into additional factors, including risk-taking inclination, innovation orientation, and environmental support. Such an exploration may offer a more comprehensive understanding of the factors precipitating entrepreneurial intentions.

2. Comparative Analysis: It may be valuable for prospective research to conduct a comparative analysis of entrepreneurial intentions amongst students from diverse colleges and universities. Such a comparison

could reveal potential discrepancies and similarities in the determinants influencing their entrepreneurial intentions. This could further enrich the understanding of the factors propelling entrepreneurship intentions across various contexts and guide the creation of educational and supportive interventions.

3. Assessment of Entrepreneurship Education and Support Interventions: Upcoming research could assess the effectiveness of specific entrepreneurship education and supportive interventions such as courses, workshops, mentoring programs, and technology business incubator activities. These evaluations could offer vital insights into the efficacy of these interventions, thereby contributing to the enhancement of entrepreneurship education.

4. Investigation into the Role of Gender, Culture, and Socioeconomic Background: Further research could delve into the influence of gender, culture, and socioeconomic background on students' entrepreneurial intentions to identify potential disparities and unique hurdles diverse student cohorts face. Such insights would aid in developing more inclusive and tailored strategies to foster entrepreneurship among heterogeneous student populations.

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Entrepreneurial Intention Among Business Administration And Entrepreneurship Students In Caraga State University - Cabadbaran City

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ABSTRACT

Graduate student unemployment has reached alarming levels in the Philippines. The government launched numerous initiatives, notably for graduates who aspire to become entrepreneurs. Unfortunately, many are terrified of failure over a lack of formal education. It remains less effective in drawing out their intention to pursue entrepreneurship as a career. Therefore, a study on determinants influencing entrepreneurial intention has been conducted. One independent variable has been chosen, demographic profile: age, gender, program, work experience, and family background; and determinants of entrepreneurial intention: attitude,perceived behavioral control, subjective norms, and entrepreneurship education as the mediating variable. The questionnaires were distributed to 239 students of business administration and entrepreneurship at Caraga State University Cabadbaran City and were collected using stratified random sampling. All data were examined using frequency/percentage analysis, mean and standard deviation, Mann-Whitney U Test, Kruskal-Wallis H Test, and Spearman rho Correlation. It was found that only the family background had a significant difference in the entrepreneurial intention of respondents, and the determinants had a significant relationship with the entrepreneurial intention. Entrepreneurship education was determined to be the most influential factor in entrepreneurial intention. By introducing the determinants that strongly influenced entrepreneurial intention, the present study contributes new and essential insights to an unsettled stream of literature.

Keywords: Entrepreneurial Intention; Attitude; Perceived Behavioral Control; Subjective Norm; Entrepreneurship Education; Philippines

1. INTRODUCTION

Numerous organizations, including government agencies, have endorsed entrepreneurship as a feasible strategy for boosting employment prospects for young people and advancing social and economic welfare (Boldureanu et al., 2020). According to Cada (2022), 70% of Filipinos believe they can be entrepreneurs, and 54% believe the country offers ample opportunities for entrepreneurial pursuits. However, 36.45% of Filipinos report a fear of failure, and only 37% express a desire to become entrepreneurs. Despite their presumed entrepreneurial capacity, 89.5% of Filipinos have not received formal entrepreneurial education in school. Incorporating entrepreneurship into Philippine higher education and encouraging students to establish their own firms are critical for driving economic growth and fostering a vibrant private sector.

The Department of Trade and Industry (2021) targeted micro, small, and medium-sized enterprises (MSMEs), which account for 99% of all business establishments and 60% of exporting firms in the

Philippines. Despite these significant contributions, official statistics indicate that poverty incidence in the Philippines rose to 18.1% in 2021 from 16.7% in 2018. Managing economic uncertainty has become standard practice for businesses globally, underscoring the necessity of securing a competitive advantage and building dynamic capabilities—qualities that are critical for small enterprises and served as vital buffers during the COVID-19 pandemic (Flammer & Ioannou, 2021). The COVID-19 pandemic disrupted economic activity across numerous nations, imposing severe hardships on business owners who were unable to interact with clients and investors in person (World Health Organization, 2020). The Philippine Statistics Authority (2023) reported that the pandemic severely impacted the national labor force, resulting in a 4.8% unemployment rate in January 2023, which left 2.37 million Filipinos aged 15 and older unemployed. Consequently, many entrepreneurs scaled back operations or closed businesses entirely, leaving solo business owners vulnerable and isolated (Torrès et al., 2021).

Like many nations, the Philippines maintains high expectations for its youth to drive economic recovery and alleviate social hardship. However, multiple factors—including education, socio-economic background, environment, psychological profile, and personality traits—heavily influence youth entrepreneurial intentions (Maheshwari et al., 2022). Empirical research is necessary to identify the most decisive variables influencing these intentions. Targeted educational programs are increasingly deployed to stimulate entrepreneurial mindsets in regions experiencing lower venture creation rates. This study aligns directly with the strategic platform of Caraga State University (CSU) President, Dr. Rolyn C. Daguil, which envisions a socially engaged, entrepreneurial, and digital university dedicated to student achievement and global citizenship through excellence in teaching, research, and extension. Central to this platform is the LIKHA Agenda, which responds to the interconnected needs of CSU's future talent and institutional assets. Research focusing on academic achievement, innovation, and venture creation contributes directly to generating new value, actionable solutions, and responsible leaders committed to sustainable regional and national development.

2. MATERIALS AND METHODS

This study employed a quantitative research design to collect and analyze numerical data regarding students' perceptions and actionable insights toward entrepreneurship. Specifically, a descriptive-correlational method was utilized. Descriptive research aims to accurately and systematically describe a population, situation, or phenomenon (McCombes, 2022), while correlational research measures the strength and direction of relationships between two or more variables (Bhandari, 2022).

The primary objective of this study was to examine entrepreneurial intentions among Business Administration and Entrepreneurship students at Caraga State University – Cabadbaran City (CSUCC). CSUCC is a government-owned higher education institution situated on an eight-hectare campus on T. Curato Street, Barangay 11, Cabadbaran City, Agusan del Norte. Cabadbaran City serves as the capital of Agusan del Norte in the Caraga Region. Data collection was restricted to students officially enrolled during the second semester of Academic Year 2022–2023 in the Bachelor of Science in Business Administration (BSBA) program—majoring in Financial Management, Marketing Management, and Human Resource Management—and the Bachelor of Science in Entrepreneurship (BS Entrepreneurship) program.

The target population comprised 625 enrolled students across the specified business programs during Academic Year 2022–2023. Using a stratified random sampling method, a sample size of 239 respondents was selected. The sample distribution consisted of 58 Financial Management students (24.3%), 52 Human Resource Management students (21.8%), 56 Marketing Management students (23.4%), and 73 Entrepreneurship students (30.5%). Data were collected using a structured survey questionnaire administered via Google Forms. The survey instrument was adapted from the validated measurement

scale developed by Jalil et al. (2021) in their study on the determinants of entrepreneurial intention among university students.

3. RESULTS AND DISCUSSION

Table 1 presents the demographic profile of the respondents in terms of age. The largest group of respondents was 21 years old (27.2%, n = 65), followed by those aged 20 years old (25.5%, n = 61) and 19 years old (20.9%, n = 50). Overall, the vast majority of respondents were young adults aged 19 to 21 years. This finding aligns with Dendup and Acharja (2017), who observed that higher education students in this age bracket represent a critical developmental stage where career preferences and entrepreneurial attitudes actively take shape.

Table 1. Profile of Respondents in Terms of Age

Age Category	Frequency (f)	Percentage (%)
18 years old	16	6.7%
19 years old	50	20.9%
20 years old	61	25.5%
21 years old	65	27.2%
22 years old and above	47	19.7%

Table 2 outlines the profile of respondents in terms of sex assigned at birth. Female students constituted the majority of the sample (75.7%, n = 181), while male students accounted for 22.2% (n = 53), and 2.1% (n = 5) preferred not to answer. This female-majority distribution reflects broader enrollment trends in Philippine business administration programs. Furthermore, literature suggests that expanding educational access and evolving economic conditions have led to increased female interest in venture creation and self-employment (Suryawirawan, 2019).

Table 2. Profile of Respondents in Terms of Sex at Birth

Sex	Frequency (f)	Percentage (%)
Male	53	22.2%
Female	181	75.7%
Prefer not to answer	5	2.1%

Table 3 summarizes the distribution of respondents across academic programs. The BS Entrepreneurship program provided the largest representation (30.5%, n = 73), followed by BSBA Financial Management (24.3%, n = 58), BSBA Marketing Management (23.4%, n = 56), and BSBA Human Resource Management

(21.8%, n = 52). As noted by Pandit et al. (2018) and Nabi et al. (2017), students enrolled in specialized entrepreneurship tracks typically display a stronger initial inclination toward venture creation, as curriculum design directly fosters business ideation and practical managerial skills.

Table 3. Profile of Respondents in Terms of Program

Academic Program	Frequency (f)	Percentage (%)
BSBA – Financial Management	58	24.3%
BSBA – Human Resource Management	52	21.8%
BSBA – Marketing Management	56	23.4%
BS – Entrepreneurship	73	30.5%

Table 4 indicates the respondents' prior work experience. A slight majority of respondents (51.0%, n = 122) had no prior work experience, whereas 49.0% (n = 117) reported having prior work experience. While work experience equips individuals with practical operational knowledge and organizational understanding, undergraduate students often seek entrepreneurial opportunities as an alternative path prior to formal corporate employment.

Table 4. Profile of Respondents in Terms of Work Experience

Work Experience	Frequency (f)	Percentage (%)
With Work Experience	117	49.0%
Without Work Experience	122	51.0%

Table 5 presents data on family business background. Most respondents (59.4%, n = 142) came from families without a business background, while 40.6% (n = 97) had a family business background. Hsu et al. (2020) highlighted that growing up in an entrepreneurial family exposes individuals to business operations, risk management, and informal mentorship, which significantly enhances self-efficacy and intention.

Table 5. Profile of Respondents in Terms of Family Business Background

Family Business Background	Frequency (f)	Percentage (%)
With family business background	97	40.6%
Without family business background	142	59.4%

Table 6 displays the respondents' level of attitude toward entrepreneurship. The overall mean score was 3.37 (SD = 0.60), interpretable as 'Strongly Agree'. The highest-rated item was Item 1 ('I have always worked hard to be among the best in my field', M = 3.52, SD = 0.59), followed by Item 4 ('I get my biggest thrills when my work is among the best', M = 3.40, SD = 0.59). These results indicate that students possess a highly favorable personal evaluation of entrepreneurial activity. This outcome is consistent with Kim et al. (2018), who demonstrated that a positive personal attitude reinforces entrepreneurial self-efficacy and venture creation intent.

Table 6. Level of Attitude Toward Entrepreneurship

Item Statement	Mean	SD	Verbal Interpretation
1. I have always worked hard to be among the best in my field.	3.52	0.59	Strongly Agree
2. I feel energetic working with innovative colleagues in a dynamic business climate.	3.37	0.60	Strongly Agree
3. I believe that the authority I have in business is mainly due to my expertise in certain areas.	3.30	0.56	Strongly Agree
4. I get my biggest thrills when my work is among the best.	3.40	0.59	Strongly Agree
5. I often sacrifice personal comfort in order to take advantage of business opportunities.	3.24	0.66	Agree

Table 7 presents the respondents' level of perceived behavioral control (PBC) toward entrepreneurship. The overall mean score was 3.17 (SD = 0.61), with a verbal interpretation of 'Agree'. The highest-rated statement was Item 2 ('If I wanted, I could certainly become self-employed after my studies', M = 3.32, SD = 0.61, 'Strongly Agree'). Conversely, lower mean ratings were observed for structural preparedness (Item 1, M = 3.15, SD = 0.62) and project development skills (Item 4, M = 3.00, SD = 0.64). This indicates that while students feel generally capable of pursuing self-employment, they recognize gaps in technical

project execution. Siregar and Nizma (2017) similarly noted that perceived feasibility is a primary determinant of entrepreneurial intentions.

Table 7. Level of Perceived Behavioral Control Toward Entrepreneurship

Item Statement	Mean	SD	Verbal Interpretation
1. I am prepared to start a viable firm.	3.15	0.62	Agree
2. If I wanted, I could certainly become self-employed after my studies.	3.32	0.61	Strongly Agree
3. There are many things I can control that enable me to choose self-employment after completion of studies.	3.22	0.58	Agree
4. I know how to develop an entrepreneurial project.	3.00	0.64	Agree
5. If I tried to start a firm, I would have a high probability of succeeding.	3.15	0.58	Agree

Table 8 reflects the level of subjective norms among respondents, yielding an overall mean score of 3.18 (SD = 0.71, 'Agree'). Item 3 ('People that I care about have a great influence on my choice of profession') received the highest mean rating (M = 3.22, SD = 0.72), closely followed by Item 4 ('I believe that people who are important to me think that I should pursue a career as an entrepreneur', M = 3.21, SD = 0.68). These findings align with Farooq et al. (2018) and Mayasari and Nurhayati (2021), confirming that social support from family, peers, and mentors positively shapes students' career choices.

Table 8. Level of Subjective Norms Toward Entrepreneurship

Item Statement	Mean	SD	Verbal Interpretation
1. I believe that my closest family thinks that I should pursue a career as an entrepreneur.	3.16	0.73	Agree
2. I believe that my closest friends think that I should pursue a career as an entrepreneur.	3.12	0.71	Agree
3. People that I care about have a great influence on my choice of profession.	3.22	0.72	Agree
4. I believe that people who are important to me think that I should pursue a career as an entrepreneur.	3.21	0.68	Agree

Table 9 illustrates the respondents' evaluation of entrepreneurship education, which received the highest overall evaluation among all determinants (M = 3.44, SD = 0.64, 'Strongly Agree'). Item 2 ('More entrepreneurship and business educational programs on campus would help students to start businesses') achieved the highest individual mean (M = 3.56, SD = 0.59), followed by Item 5 ('A creative university environment inspires me to develop ideas for new businesses', M = 3.50, SD = 0.62). These empirical findings support prior studies by Hai et al. (2022), Hoang et al. (2020), and Wu et al. (2022), which established that comprehensive academic programming directly enhances venture creation efficacy and student willingness to initiate new ventures.

Table 9. Level of Entrepreneurship Education

Item Statement	Mean	SD	Verbal Interpretation
1. Students are encouraged to pursue entrepreneurship ventures at the university.	3.42	0.60	Strongly Agree
2. More entrepreneurship and business educational programs on campus would help students to start businesses.	3.56	0.59	Strongly Agree
3. At my university, entrepreneurial activities are open not just to business students.	3.47	0.62	Strongly Agree
4. Entrepreneurship courses should be made compulsory to stimulate entrepreneurial spirit on campus.	3.25	0.76	Strongly Agree
5. A creative university environment inspires me to develop ideas for new businesses.	3.50	0.62	Strongly Agree

Table 10 summarizes the determinants of entrepreneurial intention. The aggregate mean across all dimensions was 3.29 (SD = 0.64, 'Strongly Agree'). Entrepreneurship Education emerged as the highest-rated determinant (M = 3.44), followed by Attitude Towards Entrepreneurship (M = 3.37), Subjective Norms (M = 3.18), and Perceived Behavioral Control (M = 3.17). This hierarchy reinforces the findings of Duong (2021), Farooq et al. (2018), and Siregar and Nizma (2017), indicating that while internal attitudes and social support are important, targeted education is the primary catalyst driving student interest in business venture creation.

Table 10
Summary of the Determinants of Entrepreneurial Intention

Determinant Dimension	Mean	SD	Verbal Interpretation
Attitude Towards Entrepreneurship	3.37	0.60	Strongly Agree
Perceived Behavioral Control Towards Entrepreneurship	3.17	0.61	Agree
Subjective Norms Towards Entrepreneurship	3.18	0.71	Agree
Entrepreneurship Education	3.44	0.64	Strongly Agree

Table 11 presents the respondents' overall level of entrepreneurial intention. The composite mean score was 3.35 (SD = 0.67, 'Strongly Agree'). The highest-rated item was Item 3 ('I want the freedom to express myself in my own business', M = 3.57, SD = 0.57), followed by Item 4 ('I relish the challenge of creating a new business', M = 3.45, SD = 0.59) and Item 7 ('I will make every effort to start and run my firm', M = 3.45, SD = 0.62). As emphasized by Kong et al. (2020) and Boldureanu et al. (2020), strong entrepreneurial intention is the single most reliable predictor of eventual venture creation behavior.

Table 11
Level of Entrepreneurial Intention

Item Statement	Mean	SD	Verbal Interpretation
1. I will choose a career as an employee in a company/organization.	3.18	0.70	Agree
2. I prefer to be an entrepreneur rather than to be an employee in a company/organization.	3.38	0.72	Strongly Agree
3. I want the freedom to express myself in my own business.	3.57	0.57	Strongly Agree

Item Statement	Mean	SD	Verbal Interpretation
4. I relish the challenge of creating a new business.	3.45	0.59	Strongly Agree
5. You can only make big money if you are self-employed.	3.04	0.79	Agree
6. My professional goal is to become an entrepreneur.	3.30	0.74	Strongly Agree
7. I will make every effort to start and run my firm.	3.45	0.62	Strongly Agree
8. I am determined to create a firm in the future.	3.43	0.61	Strongly Agree
9. I have very seriously thought of starting a firm.	3.35	0.68	Strongly Agree
10. I am ready to do anything to be an entrepreneur.	3.31	0.68	Strongly Agree

Table 12 presents the Kruskal-Wallis non-parametric test results examining differences in the determinants of entrepreneurial intention when respondents were grouped according to age, academic program, and sex. The analysis revealed no statistically significant differences across age groups (Chi-square = 0.869, df = 4, p = 0.929), academic programs (Chi-square = 0.652, df = 3, p = 0.884), or sex (Chi-square = 3.05, df = 2, p = 0.218). Consequently, the null hypotheses were failed to be rejected. These findings align with Strydom et al. (2020) and Ragazou et al. (2022), indicating that within specialized business tracks, demographic factors such as age and sex do not create significant variance in student entrepreneurial mindsets.

Table 12
Significant Differences in Determinants of Entrepreneurial Intention Grouped According to Age, Program, and Sex

Grouping Variable	Chi-Square (X^2)	df	p-value	Decision on Ho	Conclusion
Age	0.869	4	0.929	Failed to Reject Ho	Not Significant
Program	0.652	3	0.884	Failed to Reject Ho	Not Significant
Sex at Birth	3.050	2	0.218	Failed to Reject Ho	Not Significant

Table 13 shows the Mann-Whitney U test results comparing determinants of entrepreneurial intention across work experience and family business background. No statistically significant difference was found between students with and without prior work experience (U = 6160, p = 0.084). However, a statistically significant difference was observed based on family business background (U = 5325, p = 0.004), rejecting the null hypothesis. This result accords with Cucculelli et al. (2020), who demonstrated that growing up in an entrepreneurial household fosters an environment that values risk-taking, innovation, and perseverance, directly shaping higher entrepreneurial intentions.

Table 13
Significant Differences in Determinants of Entrepreneurial Intention Grouped According to Work Experience and Family Business Background

Grouping Variable	Mann-Whitney U	z / df	p-value	Decision on Ho	Conclusion
Work Experience	6160	—	0.084	Failed to Reject Ho	Not Significant
Family Business Background	5325	—	0.004	Reject Ho	Significant

Table 14 presents the Spearman rank correlation analysis between the determinants of entrepreneurial intention and overall entrepreneurial intention. The analysis revealed a strong, positive, and statistically significant correlation ($r_s = 0.732$, $p < 0.001$). This empirical outcome supports the Entrepreneurial Intention Model proposed by Liñán and Chen (2009), confirming that personal attitudes, subjective norms, perceived behavioral control, and educational exposure collectively exert a direct influence on student venture creation intent.

Table 14
Relationship Between Determinants of Entrepreneurial Intention and Overall Entrepreneurial Intention

Variables	Spearman rs	p-value	Decision on Ho	Conclusion
Determinants vs. Entrepreneurial Intention	0.732	< 0.001	Reject Ho	Significant

4. CONCLUSION

This study investigated entrepreneurial intention and its determinants among Business Administration and Entrepreneurship students at Caraga State University – Cabadbaran City. The demographic profile revealed that most respondents were 21 years old, predominantly female, and enrolled in the BS Entrepreneurship program. Furthermore, a majority lacked prior work experience and came from non-entrepreneurial family backgrounds.

Overall, students demonstrated highly positive evaluations across all four determinants: attitude toward entrepreneurship, perceived behavioral control, subjective norms, and entrepreneurship education. Entrepreneurship education emerged as the most influential factor, indicating that formal academic instruction, campus business incubation, and experiential learning are pivotal in developing entrepreneurial capacity.

Hypothesis testing indicated no significant differences in entrepreneurial intention when students were grouped by age, sex, program, or work experience. However, family business background produced a statistically significant difference, underscoring the powerful role of familial role models and vicarious exposure. Finally, correlation analysis confirmed a strong, positive relationship between the key determinants and overall entrepreneurial intention, providing strong empirical validation for the Entrepreneurial Intention Model within the Philippine higher education context.

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Agripreneurial Intention Among Youth From Farming Households In Eastern Samar, Philippines

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ABSTRACT

Agribusiness is crucial for improving the livelihoods of rural farmers who largely depend on agriculture as their primary source of income. However, the success of agribusiness is heavily reliant on the youth, particularly those from farming households, who can provide a high-quality human resource foundation. This study aimed to investigate the demographic factors that influence young people from farming households in Eastern Samar, Philippines, to pursue agribusiness as a potential source of self-employment. The study conducted a field survey of 496 youth aged 15 to 25 coming from farming households. The data was analyzed using descriptive and Chi-square statistics. The analysis revealed that the youths' perception of the prospects of agribusiness enterprises in Eastern Samar had a significant influence on their intention to pursue agribusiness as a future self-employment avenue or not at both the 1% and 5% levels of significance. Additionally, age, non-formal education, and practical farming experience were found to significantly influence youths' intention to take up agribusiness as a source of future self-employment. The study recommends that the youth in the province, especially those belonging to farming households, should be exposed to agricultural-related programs and seminars, increase their capabilities through practical agricultural training, and are properly oriented toward the opportunities for self-employment in agriculture.

Keywords: farming household, intention for self-employment; Theory of Planned Behavior, youth in agriculture

1. INTRODUCTION

1.1. Background of the Study

Agriculture is pivotal to numerous developing economies. Enhancing productivity and revenue in this sector is essential to eradicating poverty and attaining zero hunger—two primary objectives of the United Nations Sustainable Development Goals (SDGs)—prompting many nations to reassess their development policies (Food and Agriculture Organization [FAO], 2017). To generate sustainable revenue from agricultural operations, farmers must master the art and management of agribusiness while encouraging their offspring to pursue agri-entrepreneurship. The agricultural system possesses the capacity to provide sustainable, equitable, and diversified growth while addressing pressing challenges such as poverty, food scarcity, hunger, and youth unemployment (Ibrahim Index of African Governance, 2019; Losch, 2016; Raikes et al., 2017). For the agribusiness sector to thrive, traditional farming households—particularly the youth—must cultivate a robust propensity for establishing entrepreneurial enterprises. A substantial body of literature asserts that fostering interest in agri-entrepreneurship promotes the achievement of both local and national economic objectives (Bruton et al., 2013; Díaz-Pichardo et al., 2012; Sinyolo & Mudhara, 2018) and serves as a viable mechanism for enhancing youth employment opportunities (Yami et al., 2019). Furthermore, it is well recognized that entrepreneurship accelerates overall economic expansion across developing nations.

However, youth unemployment remains a critical structural challenge in most emerging economies, including the Philippines. Research in developing nations indicates that a significant proportion of youth have disengaged from agribusiness and primary agricultural operations (Briones, 2017; Losch, 2016; Molinario et al., 2017), leading to an increased incidence of youth unemployment. This situation has compelled unemployed youth, especially those outside formal education, to pursue informal self-employment in various legal and illegal endeavors (Chigunta, 2017). Global statistics indicate that nearly 90% of the world's youth reside in developing nations, where two-thirds of the population inhabits small agricultural households on land parcels smaller than two hectares (Rapsomanikis, 2015; United Nations Population Fund [UNFPA], 2014). In several developing nations, young individuals are expected to labor on family farms due to a lack of alternative employment options (van der Geest, 2010); nevertheless, they exhibit relatively low enthusiasm for this sector (Wuni et al., 2017). Because most of this demographic originates from marginalized socioeconomic backgrounds, youth engagement in agriculture represents a vital strategy for expanding sustainable employment (Assfaw Wossen & Ayele, 2018; Naamwintome & Bagson, 2013; Olokundun et al., 2014; Sumberg & Okali, 2013).

In agribusiness, empirical literature identifies the primary obstacles to youth engagement as a lack of formal commitment, inadequate operational support, lack of land ownership (Daudu et al., 2010), non-competitive remuneration, physical labor demands (Mibey, 2015), and limited awareness of commercial opportunities exacerbated by industry misconceptions (Aphunu & Atoma, 2010). A critical structural threat to agriculture is the aging farmer demographic (Briones, 2017), coupled with widespread rural apprehension regarding the slow pace of job creation necessary to facilitate agricultural modernization (Njeru, 2017). This aging trend adversely affects agricultural productivity, farmland yield (Rigg et al., 2020), and intergenerational farm succession (Cavicchioli et al., 2018; Duesberg et al., 2017), potentially jeopardizing national food security and sustainable land management. Consequently, public institutions have launched several interventions to address youth unemployment, food security, and youth participation in agriculture.

Agriculture serves as the cornerstone of the Philippine economy, with millions relying on agriculture and fisheries for their livelihoods (Philippine Statistics Authority [PSA], 2019). According to an ILO-modeled estimate, approximately 23% of the total Philippine workforce was employed in agriculture in 2019 (World Bank Group, 2019), while the average age of Filipino farmers reached 60 years (Department of Agriculture [DA], 2017). This aligns with international trends showing that the average farmer age in the United States and Sub-Saharan Africa is also around 60 years (Economic and Social Council [ECOSOC], 2014). In response to the aging agricultural workforce, the Philippine government launched several targeted programs to encourage youth entry into agriculture. Key initiatives include the Youth Agrientrepreneurship Program, the Mentoring and Attracting Youth in Agribusiness (MAYA) Program, and the Kapital Access for Youth Agripreneurs (KAYA) loan facility, alongside training workshops provided by the Department of Trade and Industry (DTI). These programs are implemented through government entities such as the Department of Agriculture (DA), the Agricultural Training Institute (ATI), and the DA-Agricultural Credit Policy Council (DA-ACPC). In 2015, youth engagement in Philippine agriculture was recorded at approximately 19% of the sector's total labor force (Briones, 2017).

Despite these initiatives, anecdotal and empirical evidence suggests that Filipino youth are increasingly disinterested in farming, a sentiment often shared by their parents. A survey of Filipino rice farmers by Palis (2020) revealed that 65% of respondents preferred their children to earn a college degree and pursue urban or overseas careers, whereas only 35% preferred their offspring to remain in rice farming. Despite the importance of agricultural modernization, younger generations remain hesitant to take over family farms or embark on agribusiness enterprises. Glauben et al. (2009) and Bizikova et al. (2014) noted that individuals raised in agricultural households are five times more likely to choose agricultural careers than

those from non-farming backgrounds, highlighting the potential for intergenerational enterprise transfer. Nuthall (2009) similarly observed that many farmers hope their children will continue the family practice, supported by strong correlations between parental occupation and youth career paths (De Silva & Sudarshan, 2015).

Nonetheless, there is limited empirical evidence examining whether youth from agricultural households in Eastern Samar, Philippines, intend to engage in agribusiness for self-employment, despite parental heritage and government incentives. Therefore, this study aimed to determine the demographic factors influencing youth intentions, identify youth employment preferences, assess preferred agribusiness ventures, and evaluate youth perceptions of agribusiness. The study hypothesized that there is no statistically significant relationship between respondents' socio-demographic characteristics and their intention to pursue agribusiness. Findings from this study offer practical value for policymakers designing strategic rural youth development initiatives and provide academic literature with empirical baselines for extension program planning.

1.2. Conceptual Framework

This study adopts Ajzen's (1991) Theory of Planned Behavior (TPB), which posits that an individual's decision-making process directly determines their intention to pursue self-employment. According to TPB, behavioral intention is shaped by three key constructs: attitudes toward the behavior, subjective norms, and perceived behavioral control. Fishbein and Ajzen (1975) defined intention as an individual's subjective probability that they will perform a specific behavior. Ajzen (1988) further explained that intention serves as an immediate antecedent of behavior, capturing the motivational factors, effort, and planning invested to execute that behavior. A youth's decision to pursue agribusiness reflects their personal attitude, perceived social pressure from family and community, and perceived control over launching a business relative to non-agricultural employment.

TPB evolved from the Theory of Reasoned Action (Fishbein & Ajzen, 1975), which emphasized personal attitudes and subjective norms. By integrating perceived behavioral control, TPB accounts for perceived external opportunities and internal capabilities, making it a robust framework for predicting complex economic decisions such as entrepreneurship. Among youth from agricultural households, entrepreneurial intention may reflect a desire to build upon familial heritage or a preference to seek alternative off-farm employment. Socio-psychological literature shows that demographic and personal attributes—including age, education, achievement motivation, risk tolerance, and innovativeness—significantly shape entrepreneurial intentions among rural populations (Khan & Rana, 2016; Patel & Sharma, 2020; Sandhu et al., 2018). Furthermore, an entrepreneurial mindset strongly correlates with the aspiration to establish an agribusiness enterprise (Damanpour et al., 2019; Mafukidze & Mvula, 2018; Nyawata et al., 2017).

2. METHODOLOGY

2.1. Research Design

This study employed a descriptive-correlational research design to examine the relationships between the demographic profile of youth from farming households and their intention to engage in agribusiness enterprises.

2.2. Locale of the Study

The study was conducted in Eastern Samar, one of the six provinces comprising the Eastern Visayas Region (Region VIII) in the Philippines. The province consists of 22 municipalities and one city (Borongan City).

Twenty of the 22 municipalities are coastal, while two are inland, emphasizing that agriculture and fisheries are the primary economic sectors of the province (PSA, 2019). Nearly three-fourths of Eastern Samar's employed population works in agriculture; however, persistent low productivity and frequent natural disasters have constrained regional economic growth. According to the 2020 Census, the province had a total population of 477,168 residents. Eastern Samar encompasses 461,720 hectares, of which 237,785 hectares are classified as agricultural land dedicated primarily to coconut, abaca, banana, and pineapple production (PSA, 2018). Despite its agricultural resources, Eastern Samar has historically recorded high poverty incidence within Region VIII, although notable progress was achieved as poverty rates declined from 49.5% in 2018 to 37.7% in 2021 (PSA, 2021).

2.3. Respondents of the Study

The target population comprised youth members belonging to agricultural households in Eastern Samar. Following the United Nations definition, 'youth' were operationalized as individuals aged 15 to 24 years (United Nations, 2013). A household was classified as an agricultural household if at least one member managed a farm or if the primary income earner was economically engaged in farming operations (United Nations, 1984). Inclusion criteria specified that respondents must be dependent relatives within the household fitting the age range. Individuals currently employed in full-time paid formal agribusiness roles were excluded.

2.4. Sampling Procedure

A non-probability purposive sampling strategy combined with snowball sampling was utilized to recruit respondents across various municipalities in Eastern Samar. Given an unknown total population parameter of farming youth, Cochran's formula n = (Z^2 * p * q) / e^2 was applied, where Z = 1.96 (95% confidence interval), p = 0.50 (maximum variability assumption), and e = 0.05 (margin of error), yielding a minimum required sample size of 385 respondents. To enhance statistical power, a total of 496 youth members were surveyed.

2.5. Data Gathering Procedure

Primary quantitative data were collected through face-to-face questionnaire administration, supplemented by secondary data from governmental reports and academic literature. Standard ethical procedures were strictly observed: written informed consent was obtained from all adult participants, guaranteeing strict anonymity and confidentiality. For minor participants (aged 15 to 17), informed assent was collected alongside written parental consent prior to survey administration.

2.6. Research Instrument

A structured survey instrument adapted from Zakaria, Adam, and Abujaja (2014) was used. Part A gathered respondent profile data (age, sex, marital status, domicile, current formal education status, highest educational attainment, non-formal training participation, and practical farming experience). Part B measured self-employment preferences, and Part C evaluated preferred types of agribusiness enterprises.

Youth perceptions toward agribusiness were measured using 14 statements adapted from Zakaria, Adam, and Abujaja (2014) and Ayanda et al. (2012). Responses were scored on a 5-point Likert scale: 'Strongly Disagree' (-2), 'Disagree' (-1), 'Undecided' (0), 'Agree' (+1), and 'Strongly Agree' (+2).

2.7. Analysis of Data

Data were analyzed using descriptive statistics (frequencies, percentages, means, and standard deviations) and inferential statistics. Independent samples t-tests / Analysis of Variance (F-statistics) were calculated to compare perception scores between youth intending to pursue agribusiness and those who do not. The Chi-Square Test of Independence (χ^2) was conducted to test hypothesized associations between demographic attributes and agribusiness intention at the $\alpha = 0.05$ and $\alpha = 0.01$ levels.

3. RESULTS AND DISCUSSION

3.1. Demographic Profile of the Respondents

Table 1 outlines the demographic profile of the 496 youth respondents from agricultural households in Eastern Samar. The sample comprised 301 males (60.69%) and 195 females (39.31%). In terms of age, 292 respondents (58.87%) were aged 15–20 years, while 204 (41.13%) were aged 21–25 years. Geographically, 72.58% resided in rural barangays, 19.56% in municipal centers, 4.23% in sitios, and 3.63% in city areas, reflecting the rural nature of Eastern Samar. The vast majority (91.33%) were single.

Regarding education, 81.86% were currently attending formal school. Nearly half (49.19%) had completed secondary education, while 47.98% had reached tertiary education. Only 3.43% (17 respondents) had participated in non-formal technical-vocational training (e.g., TESDA courses). Interestingly, 56.05% of the respondents reported having no prior practical farming experience, indicating limited hands-on involvement in their family's farm operations despite growing up in agricultural households. This aligns with observations by Molinario et al. (2017) and Mengistu (2017), who noted that youth in farming households are increasingly detached from traditional primary agriculture.

Table 1. Demographic Profile of Youth Respondents (N = 496)

Characteristics	Frequency (f)	Percentage (%)
Sex		
Male	301	60.69
Female	195	39.31
Age Category		
15–20 years old	292	58.87
21–25 years old	204	41.13
Place of Domicile		
Barangay	360	72.58
Municipality	97	19.56
Sitio	21	4.23
City	18	3.63
Marital Status		
Single	453	91.33
Married	41	8.27
Separated	1	0.20

Widow/Widower	1	0.20
Highest Educational Attainment		
Secondary Education	244	49.19
Tertiary Education Level	238	47.98
Basic Education Level	10	2.02
Alternative Learning System (ALS)	4	0.81
Formal Education Status		
Currently Attending	406	81.86
Not Attending	90	18.14
Non-Formal Education (TESDA, etc.)		
Has Participated	17	3.43
Has Not Participated	479	96.57
Practical Farming Experience		
With Experience	218	43.95
Without Experience	278	56.05

3.2. Youth's Job Preference

Table 2 presents the employment preferences of youth from farming households. Over half of the respondents exhibited a moderate preference (42.74%) or strong preference (35.08%) for self-employment in agribusiness, while 22.18% did not prefer it. In non-agribusiness self-employment, 77.42% expressed a moderate preference. However, wage employment in the public or private sector emerged as the overall preferred career choice, with 44.95% rating it as 'Most Preferred' and 41.73% as 'Somewhat Preferred' (totaling 86.68%). These results indicate that while youth maintain a favorable interest in agribusiness, formal off-farm wage employment remains their primary career ambition, corroborating Canlas and Pardalis (2009).

Table 2. Distribution of Youth Job Preferences (N = 496)

Job Preference Category	Not Preferred (f)	%	Somewhat Preferred (f)	%	Most Preferred (f)	%
Self-employed in Agribusiness	110	22.18	212	42.74	174	35.08
Self-employed in Other Enterprises	112	22.58	384	77.42	0	0.00
Employed in Public/Private	66	13.31	207	41.73	223	44.95

Sector

3.3. Preference for Agribusiness Enterprises

Among the 386 respondents who expressed an intention to engage in agribusiness, Table 3 breaks down their preferred sub-sectors. Crop farming was the most preferred enterprise choice, selected by 33.16% (n = 128), followed by livestock and poultry production (22.02%, n = 85), agricultural input supply enterprises (18.65%, n = 72), and agro-processing and marketing (17.62%, n = 68). Fisheries/aquaculture (5.44%, n = 21) and agro-forestry/tree crops (3.11%, n = 12) were the least preferred. This distribution aligns with Saka et al. (2019), who noted that youth prefer short-cycle, market-oriented agricultural enterprises such as crop and livestock production.

Table 3. Distribution of Preferred Agribusiness Enterprises (n = 386)

Agribusiness Enterprise Sub-sector	Frequency (f)	Percentage (%)
Crop Farming	128	33.16
Livestock and Poultry Enterprise	85	22.02
Input Enterprise (seeds, feeds, machinery, equipment)	72	18.65
Agro-Processing and Agricultural Marketing	68	17.62
Fisheries and Aquaculture	21	5.44
Agro-Forestry and Tree Crops	12	3.11
Total Intending Respondents	**386**	**100.00**

3.4. Influence of Youth Perceptions on Agribusiness Intention

Table 4 compares mean perception scores between youth intending to enter agribusiness (n = 386) and those with no agribusiness intention (n = 110). Statistically significant differences were observed across several key statements. Youth intending to pursue agribusiness agreed more strongly that agribusiness has high prospects for success in Eastern Samar (Mean = 3.03 vs. 2.77, $F = 14.45$, $p < .001$) and that familial business knowledge gave them confidence to succeed as agri-entrepreneurs (Mean = 2.90 vs. 2.41, $F = 9.35$, $p = .002$). Furthermore, intending youth held higher confidence in parental foundational training (Mean = 2.87 vs. 2.45, $F = 14.99$, $p < .001$) and perceived agribusiness as lucrative (Mean = 2.49 vs. 2.30, $F = 5.19$, $p = .023$). These findings reinforce Amujal et al. (2019) and Henning et al. (2022), demonstrating that positive sector perceptions and family mentorship strongly drive youth entrepreneurial intentions.

Table 4. Comparison of Perception Mean Scores by Agribusiness Intention

Perception Statements	Yes (n=386)	No (n=110)	F-stat	df	Sig. (p)
1. It is easy to create self-employment in agribusiness	1.96	1.77	1.25	494	.265

2. Agricultural-related enterprises are very lucrative	2.49	2.30	5.19	494	.023*
3. Agribusiness has high potential for self-employment in Eastern Samar	2.90	2.62	3.40	494	.066
4. People of Eastern Samar rely primarily on agriculture for income	2.75	2.56	1.53	494	.217
5. Agribusiness has high prospects of success in Eastern Samar	3.03	2.77	14.45	494	< .001**
6. Agriculture in Eastern Samar has a lot of untapped potential	2.88	2.65	3.85	494	.050*
7. Government policies favor agriculture enterprise creation	2.60	2.29	0.44	494	.506
8. Agriculture is a less risky business enterprise in Eastern Samar	2.29	2.14	1.15	494	.284
9. Agriculture is a business and not just a way of life	1.79	1.55	0.86	494	.353
10.	2.59	2.05	4.29	494	.039*

Agribusiness befits my status as someone from a farming household					
11. Being born in a farming household provided basic knowledge for success	2.87	2.45	14.99	494	< .001**
12. Knowledge from parents provided confidence to be an agri-entrepreneur	2.90	2.41	9.35	494	.002**
13. Practical skills from farming household will help me succeed	2.78	2.51	0.53	494	.466
14. Agricultural entrepreneurs have requisite knowledge for success	2.70	2.28	4.31	494	.038*

3.5. Personal Attributes and Agribusiness Intention

Chi-Square tests of independence (Table 5) were conducted to evaluate relationships between personal attributes and agribusiness intention. Age was found to be a highly significant predictor, $\chi^2(1, N = 496) = 202.32$, $p < .001$. Specifically, 100% of respondents aged 15–20 years expressed an intention to engage in agribusiness, compared to only 46.08% of those aged 21–25 years. This finding supports Tadele and Gella (2012), who observed that younger rural adolescents hold higher initial enthusiasm for agriculture before encountering post-school labor market realities. However, this result contradicts Osabutey et al. (2018), Simeon et al. (2020), and Fanta and Gebresenbet (2020), who reported higher entrepreneurial intentions among older youth.

Non-formal education participation was also significantly associated with agribusiness intention, $\chi^2(1, N = 496) = 3.86$, $p = .049$. Similarly, practical farming experience showed a statistically significant relationship, $\chi^2(1, N = 496) = 4.14$, $p = .042$. Among youth with practical experience, 82.11% intended to enter agribusiness, compared to 74.46% among those without experience. Variables such as sex, marital status,

domicile, formal education status, and highest educational attainment showed no statistically significant association with agribusiness intention ($p > .05$).

Table 5. Crosstabulation of Personal Attributes and Agribusiness Intention (N = 496)

Attributes	Intend (Yes)	Do Not Intend (No)	Total	Chi-Square (χ^2), p-value
Age Category				
15–20 years old	292 (100.0%)	0 (0.0%)	292 (100.0%)	$\chi^2(1) = 202.32$, $p < .001$**
21–25 years old	94 (46.08%)	110 (53.92%)	204 (100.0%)	
Sex				
Male	227 (75.41%)	74 (24.59%)	301 (100.0%)	$\chi^2(1) = 2.57$, $p = .109$
Female	159 (81.54%)	36 (18.46%)	195 (100.0%)	
Marital Status				
Single	351 (77.48%)	102 (22.52%)	453 (100.0%)	$\chi^2(3) = 4.44$, $p = .217$
Married	34 (82.93%)	7 (17.07%)	41 (100.0%)	
Separated / Widowed	1 (50.00%)	1 (50.00%)	2 (100.0%)	
Place of Domicile				
Barangay	279 (77.50%)	81 (22.50%)	360 (100.0%)	$\chi^2(3) = 0.39$, $p = .943$
Municipality	76 (78.35%)	21 (21.65%)	97 (100.0%)	
Sitio	16 (76.19%)	5 (23.81%)	21 (100.0%)	
City	15 (83.33%)	3 (16.67%)	18 (100.0%)	
Formal Education Status				
Attending	312 (76.85%)	94 (23.15%)	406 (100.0%)	$\chi^2(1) = 1.23$, $p = .267$
Not Attending	74 (82.22%)	16 (17.78%)	90 (100.0%)	
Non-Formal Education				
Attending / Completed	10 (58.82%)	7 (41.18%)	17 (100.0%)	$\chi^2(1) = 3.86$, $p = .049$*
Not Attending	376 (78.50%)	103 (21.50%)	479 (100.0%)	
Practical Farming Experience				

With Experience	179 (82.11%)	39 (17.89%)	218 (100.0%)	$\chi^2(1) = 4.14$, $p = .042^*$
Without Experience	207 (74.46%)	71 (25.54%)	278 (100.0%)	

4. CONCLUSION

Although raised in agricultural households, only 386 out of 496 youth (77.82%) expressed an intention to engage in agribusiness for self-employment. Off-farm wage employment in the public or private sector remains the single most preferred career option (preferred by 86.68% overall). Among intending youth, crop farming (33.16%) and livestock/poultry production (22.02%) represent the primary sub-sectors of interest. Statistically significant perception differences exist between intending and non-intending youth regarding sector growth potential, perceived profitability, and parental mentorship. Furthermore, age, non-formal technical training, and practical farming experience significantly influence youth agribusiness intentions. These conclusions underscore the need to bridge the gap between initial youth interest and practical enterprise creation.

5. RECOMMENDATION

1. Policy and Program Integration: Government agencies (DA, ATI, DTI) should collaborate with secondary and tertiary educational institutions to integrate experiential agribusiness management courses and model farm incubator experiences early in the academic curriculum to capture youth interest in the 15–20 age bracket.
2. Technical-Vocational Expansion: TESDA and regional agricultural institutions should expand non-formal training facilities specifically tailored to modern agribusiness operations, digital marketing, and value-added agro-processing.
3. Financial and Incubator Support: Implement accessible micro-credit facilities and mentoring frameworks (such as KAYA and MAYA) that specifically target youth without initial farm land ownership or capital.

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A Systematic Literature Review on the Digital Technology Adoption of Women Entrepreneurs

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ABSTRACT

This article presents a systematic literature review aiming to understand how women entrepreneurs adopt digital technology for their businesses. A total of 63 academic literature articles in English were identified and analyzed using the Scopus and Web of Science electronic databases. This article focuses on five main discussion points, namely how women in general use digital technology, the impact of its use on women, the extent of participation of women in the development of IT, how women entrepreneurs use digital technology, and factors influencing women entrepreneurs to adopt digital technology. Gender equality in digital technology adoption is a relatively recent and developing concept. Based on the outcome of this systematic review, it was found that only a few studies are within the focus area and that discussions on the topic need to be expanded. Besides exhausting the discussion by expanding the area of research to cover related topics, future studies may explore cultural and geographical nuances related to the digital technology adoption of women entrepreneurs.

Keywords: Gender equality, Women entrepreneurs, Systematic literature review, Digital technology, Technology adoption

1. INTRODUCTION

As digital technology increasingly becomes ubiquitous and significant in many spheres of daily living, discourses on gender are brought to the fore, especially on the disparities in digital technology adoption between men and women (Kashyap et al., 2020; Krieger-Boden & Sorgner, 2018; Kvasny et al., 2008; Michell et al., 2018; Quagrainie et al., 2016; Zhou & Purushothaman, 2015), as well as the factors to which these disparities can be attributed. Discussions in this field have become relevant considering that even now, despite increased efforts particularly from governments in pushing for gender equality, categorizations persist in occupations where women are delegated to doing more 'feminine' jobs like care work but less in science, technology, engineering and mathematics, or STEM-related professions (Krieger-Boden & Sorgner, 2018; Marzano & Lubkina, 2019; Michell et al., 2018; Zhou & Purushothaman, 2015). Notwithstanding women's active role in higher education, and their attainment of leadership positions in higher education institutions, a gender gap has been observed in STEM-related fields and this has been found to cause disparities in terms of women's career growth (European Commission, 2018; Krieger-Boden & Sorgner, 2018; Marzano & Lubkina, 2019; Michell et al., 2018; Zhou & Purushothaman, 2015). The inequality hinders women from taking full advantage of the opportunities in areas where they could have empowered themselves, especially in this technology and digital age (Krieger-Boden & Sorgner, 2018; Zhou & Purushothaman, 2015).

The enduring gender gap is aggravated by the digital divide that exists at the personal level and extends from national to global levels (Kvasny et al., 2008). This is reflected in the inequality observed between men's and women's access to technology, the knowledge to maximize its use, the availability and

reliability of technological infrastructures present in urban and rural areas, as well as the level of technology available in first-world and third-world countries (Ferris et al., 2022; Orser et al., 2019; Woetzel et al., 2015). While there is some evidence showing how technology poses threats to women and may in some instances amplify gender bias and marginalization (e.g., Donnelly & Stapleton, 2021; Kelly & McAdam, 2022; Krieger-Boden & Sorgner, 2018; Savoldi, 2016; Wendt et al., 2020), the advantages of digital technology cannot be overemphasized. The broad range of benefits that technology offers opens opportunities for women's empowerment and emancipation (Islam & Muzi, 2022; Kelly & McAdam, 2022; Khalafzai & Nirupama, 2011; Krieger-Boden & Sorgner, 2018; Perez-Lu et al., 2018; Svetlik & Bacikova, 2015; Viollaz & Winkler, 2022; Wendt et al., 2020).

It is thus important that in order to advance the welfare of women, policymakers and other stakeholders look at digital technology adoption through a gender lens (Fountain, 2000; Islam & Muzi, 2022; Krieger-Boden & Sorgner, 2018; Labantu, 2021; Savoldi, 2016). Although gender equality issues have gained much attention in recent years, there is scarce research on digital technology adoption by women to address this gender bias, especially in the world of entrepreneurship. Considering the significance of the topic to both theory and practice, this study intends to surface themes focusing on the digital technology adoption of women entrepreneurs from the extant literature using the systematic literature review (SLR) approach.

Given this dearth of studies related to the topic, this study seeks to answer the following research questions (RQs):
RQ1: What is the corpus of research related to the digital technology adoption of women entrepreneurs?
RQ2: What are the major foci of studies related to the digital technology adoption of women entrepreneurs?

To address these RQs, this paper was developed to meet the following objectives:
- Capture the corpus of research related to the digital technology adoption of women entrepreneurs.
- Explore themes in the literature that focused on the digital technology adoption of women entrepreneurs.

The first objective was met using the SLR approach to determine the whole body of research related to the field. The same body of literature was subjected to a bibliometric analysis to capture this corpus of studies. Next, the second objective was met using a co-word analysis to surface themes from the literature that focused on the digital technology adoption of women.

2. METHODOLOGY

As noted, this paper relied on the SLR approach to expound on the research topic. A systematic review of literature can be described as a research method and process for selecting and analyzing relevant research that fits a predefined set of criteria to answer a specific research question or hypothesis (Snyder, 2019). Originally and widely adopted in the medical field, systematic reviews have found their way into business research because of their advantages in producing systematic, transparent, and reproducible search results and have been referred to as the gold standard among all literature reviews (Snyder, 2019).

For this paper, we considered electronic research databases Scopus and Web of Science as the primary sources for selecting articles that would be included in this systematic review. The two abstract and citation databases were chosen because they are regarded as comprehensive (Falagas et al., 2008; Gudanowska, 2017) and the quality of research papers indexed is considered superior to those listed in Google Scholar, which has fewer features for filtering titles (Mingers & Meyer, 2017). Figure 1 shows the schema of the methodology adopted in conducting a systematic review of studies related to the digital technology adoption of women.

As shown in Figure 1, the following keywords were used in filtering the articles selected for this review: TITLE-ABS-KEY ("women" AND digital technology*). 'TITLE-ABS-KEY' refers to the sections of the articles where the search key terms must appear. It means that all the terms must appear in the title, abstract, and keywords of the document.

Filters were added to refine the search and select final or completed journal and conference papers written in the English language only. The query generated a total of 860 titles. Using the web-based SLR tool Rayyan, duplicates and papers not related to the topic being studied were excluded. The final screening returned a total of 63 articles that comprise the systematic review in this study.

Table 1 lists the number of publications that emerged from this systematic review. The earliest publications appeared in the year 2000. Most of the papers were written in recent years: 2022, 2021, and 2019.

The final papers were subjected to bibliometric data analysis using the software VOSviewer. Figure 2 shows the cluster of keywords or the co-occurrence of terms appearing in the titles, abstracts, and body text of the documents. As anticipated, the word 'woman' emerged as the central node of the map shown in Figure 2. It represents the strongest link in the network connecting to other clusters, followed by the word 'technology'. Together, they form possible themes that inform this systematic review.

3. FINDINGS

The major observations from this systematic review are summarized in the succeeding sections, which are arranged according to the categories and themes identified in Figure 2.

3.1 *Theme 1: Women's use of digital technology*

The first theme extracted from this systematic literature review on the digital technology adoption of women entrepreneurs centers on women's general use of digital technology. The studies included in this analysis identified smartphones as the most widely used devices by women accessing the internet (Greene, 2020; Seo et al., 2021; Steel, 2021), with Facebook and WhatsApp representing their preferred applications (Greene, 2020; Steel, 2021). Women use digital technology mainly to access social media (Seo et al., 2021; Thompson & Paul, 2016). Apart from social media interactions, women rely on digital technology to access information (Perez-Lu et al., 2018; Thompson & Paul, 2016). During the COVID-19 pandemic, women relied heavily on social media for relevant public health information (Seo et al., 2021).

The study by Perez-Lu et al. (2018) found that most pregnant women respondents were willing to receive prenatal information via the internet; when such information is accessible online, they are motivated to use the internet more frequently. Women also rely on digital technology for daily routines such as online shopping, banking, searching for recipes, and utilizing navigation applications (Thompson & Paul, 2016).

Digital technology is also used by women for leisure and entertainment, including gaming, streaming movies, and photography (Greene, 2020; Thompson & Paul, 2016). In one study (Greene, 2020), nature photography served as a creative strategy and a form of agency for refugee women.

Women also utilize digital technology for entrepreneurship as either a primary or supplementary source of income (Quagrainie et al., 2016; Steel, 2021). For instance, some women rely on the internet to equip themselves and upgrade their business capabilities (Quagrainie et al., 2016). They also use digital platforms to build social networks, strengthen client relationships, foster employee engagement, build brand equity, and gather feedback from potential and existing customers (Quagrainie et al., 2016).

Meanwhile, women entrepreneurs in South Sudan considered smartphones, Facebook, and WhatsApp to be enabling platforms for promoting, operating, and expanding their businesses locally and globally (Steel,

2021). Despite these opportunities, significant challenges were encountered. These included language barriers, a lack of female entrepreneurs serving as role models or mentors, financial constraints, and insufficient business management skills (Abima et al., 2021; Krieger-Boden & Sorgner, 2018; Sanchez & Sanchez, 2017; Seo et al., 2021).

Women in Uganda were more likely to adopt digital technology if instructions or software interfaces were provided in their native language (Abima et al., 2021). Furthermore, the gender gap in STEM education hinders women from maximizing opportunities to empower themselves in the digital age (Krieger-Boden & Sorgner, 2018).

In addition to financial constraints, precarious housing conditions were found to impede access to and use of computers and the internet by women transitioning from incarceration (Seo et al., 2021). Prior to the pandemic, these women typically visited public libraries, workforce training centers, or homes of acquaintances to access the internet (Seo et al., 2021). As the COVID-19 pandemic induced unemployment and income reductions, they could no longer pay for internet subscriptions (Seo et al., 2021). This was aggravated by the closure of public spaces where they could otherwise have freely accessed the internet (Seo et al., 2021). Lack of support from spouses and children was likewise identified as a key factor contributing to low ICT adoption for employment and entrepreneurship among rural women (Sanchez & Sanchez, 2017).

3.2 *Theme 2: Impact of digital technology use on women*

Another major theme from this review concerns the overall impact of digital technology adoption on women. Several studies confirmed the substantial benefits of digital technology. It is regarded as an enabling tool that improves women's well-being and promotes gender equity in the workplace (Rajahonka & Villman, 2019). It also serves as an accessible gateway that helps women secure employment and initiate venture creation, including digital entrepreneurship (Kelly & McAdam, 2022; Khalafzai & Nirupama, 2011; Krieger-Boden & Sorgner, 2018; Seo et al., 2021; Wendt et al., 2020).

A study on Greenlandic women linked mobile phone, Facebook, and digital platform adoption to increased economic engagement, enabling women to convert hobbies into micro-enterprises, market products regionally and internationally, generate household income, and purchase discounted goods through online groups (Wendt et al., 2020). Others acquired and refined business skills via educational platforms like YouTube, while social media networks offered emotional support to mitigate social isolation (Wendt et al., 2020). Private social media groups provided safe virtual spaces for self-expression, networking, and peer advice (Wendt et al., 2020).

Through regular engagement with digital technology, women reported an increase in self-confidence, heightened awareness of legal rights, and greater interest in technical resources (Khalafzai & Nirupama, 2011). They developed cyber safety awareness and improved their digital information processing and communication channels across professional and personal domains (Seo et al., 2021). For female employees, digital tools enhance job performance (Mosseri et al., 2022), whereas women entrepreneurs value the operational flexibility and sense of personal agency these tools afford (Kelly & McAdam, 2022).

Notwithstanding these positive impacts, significant drawbacks and vulnerabilities exist. Studies indicate that women experience various forms of online abuse and feel compelled to adopt defensive measures (Hassan et al., 2018; Wendt et al., 2020). In Greenland, women reported receiving unsolicited messages and harassment from male users, causing discomfort and distress (Wendt et al., 2020).

An online survey in Pakistan revealed sexual harassment as the most prevalent form of cyber abuse targeted at women, followed by relationship-based harassment (Hassan et al., 2018). Pakistani women were predominantly harassed via mobile devices and frequently subjected to victim-blaming (Hassan et

al., 2018). Depression, severe anger, suicidal ideation, and shame were common psychological consequences (Hassan et al., 2018). Notably, female victims reported higher rates of suicidal ideation than male victims following online harassment (Hassan et al., 2018).

Meanwhile, female entrepreneurs in the health and fitness industry struggle to meet commercial pressures to maintain active digital media influencer personas, coping by attempting to position themselves as domain experts (Kelly & McAdam, 2022). Additionally, some female employees view digital technology as a tool employed by management to enforce surveillance and demand workplace efficiency (Mosseri et al., 2022).

3.3 *Theme 3: Participation of women in IT development*

The participation of women in the design and engineering of information technology (IT) emerged as another critical theme. Studies demonstrate that male dominance in STEM fields represents a structural barrier to women's active participation in IT development (Krieger-Boden & Sorgner, 2018; Marzano & Lubkina, 2019; Michell et al., 2018; Zhou & Purushothaman, 2015). This gender disparity restricts the representation of female IT designers and software engineers. Low female enrollment in computing disciplines stems partly from perceptions that technology fields offer limited career advancement for women (Krieger-Boden & Sorgner, 2018; Marzano & Lubkina, 2019; Michell et al., 2018). Furthermore, women who enter these fields frequently experience gender discrimination (Fountain, 2000; Kvasny et al., 2008; Michell et al., 2018; Yansen & Zukerfeld, 2014).

Nevertheless, women have established strong presence in specialized sectors where they contribute directly to smart technology development. For instance, in the wearables and garments industry in developing economies, female specialists design small-scale intelligent devices and interactive sensor components (Vishkaie, 2018).

Historically, women also delivered pivotal contributions during early phases of architectural computing and technological innovation. Doyle and Senske (2021) highlighted women's central involvement in architectural computing, spanning technical and administrative domains from pre-design computing adoption to project management and 3D computer graphics development. Female professionals were instrumental in software engineering, process documentation, system testing, user training, and technical support (Doyle & Senske, 2021).

Digital tools are increasingly designed to address gender-specific needs, leveraging women's lived experiences as design catalysts. For example, participatory mobile mapping applications have been developed to record urban spaces associated with fear, informing gender-sensitive municipal planning (Savoldi, 2016). Crowdsourced data regarding urban safety risks enabled spatial visualizations that assist urban planners in addressing public safety concerns (Savoldi, 2016). In Peru, a customized electronic health record system was deployed to address maternal health needs, digitizing health metrics to streamline data retrieval and improve prenatal monitoring (Perez-Lu et al., 2018).

3.4 *Theme 4: Technology utilization by women entrepreneurs*

Digital platforms lower barriers to market entry, allowing female entrepreneurs to expand venture creation. Women engage in digital entrepreneurship by distributing products and services on digital platforms or establishing independent enterprises (Jawad et al., 2021; Kang, 2022; Kelly & McAdam, 2022; Khalafzai & Nirupama, 2011; Kvasny et al., 2008; McAdam et al., 2020; Mendes, 2022; Ughetto et al., 2020). Feminist entrepreneurs ('fempreneurs') deploy digital technology to advance social equity and political agendas while driving commercial ventures (Mendes, 2022). This enables transitions from traditional employment to self-employment, building autonomous income streams (Mendes, 2022).

Female managers similarly leverage digital technology to streamline organizational communication (Orkoh & Viviers, 2021) and foster employee well-being and workplace equity (Rajahonka & Villman, 2019). Technology adoption enhances enterprise capability (Rajahonka & Villman, 2019), facilitating market intelligence gathering, team collaboration, and customer relationship management (Pergelova et al., 2019; Quagrainie et al., 2016). Furthermore, mobile financial services enable women-led businesses to manage supplier payment channels and improve cash flow management (Islam & Muzi, 2022).

E-commerce platforms enable women to market, operate, and scale business operations (Krieger-Boden & Sorgner, 2018). Resource constraints have not prevented female founders from cultivating entrepreneurial ecosystems (Pergelova et al., 2019; Steel, 2021). Instead, women mobilize professional networks and partner with domestic and international stakeholders to access wider markets (Pergelova et al., 2019; Steel, 2021). Furthermore, female business owners overcome operational hurdles by leveraging individual competencies and institutional support from government programs, family members, and spouses (Jawad et al., 2021; Mamabolo & Lekoko, 2021; Sanchez & Sanchez, 2017).

However, literature indicates that digital entrepreneurship does not yield uniform benefits. Outcomes remain contingent upon socioeconomic privilege, infrastructure access, technical expertise, and capital allocation (Dy, 2022; Sanchez & Sanchez, 2017).

Among young professionals, interest in technology is present across genders but remains more pronounced among men (Franken & Wattenberg, 2019). Differences also exist in technology application: women tend to utilize digital platforms primarily for social networking and general communication, while showing lower engagement with core technical functions, algorithmic problem-solving, optimization, and technical interdisciplinary competencies (Franken & Wattenberg, 2019). This divergence carries leadership implications, as executive roles in technology sectors prioritize technical proficiencies (Franken & Wattenberg, 2019). Disparities are reinforced because women are often introduced to computing technology at later ages than men (Orser et al., 2019). Domestic responsibilities further restrict opportunities for women to pursue technical skill acquisition (Orser et al., 2019), alongside lower participation in technical projects (Kang, 2022). Consequently, the gender gap in ICT adoption manifests well before business inception (Orser et al., 2019). Additionally, women must navigate a scarcity of female entrepreneurial mentors and build financial and strategic capabilities (Bannier et al., 2019; Krieger-Boden & Sorgner, 2018).

3.5 *Theme 5: Factors influencing digital technology adoption*

The final major theme addresses determinants influencing digital technology adoption among women entrepreneurs. In a study of 17 women entrepreneurs, Suseno and Abbott (2021) found that adoption of digital social innovations was primarily driven by a desire to resolve specific community needs. Human capital investments, including formal education and specialized training, significantly increase adoption rates (Abima et al., 2021; Orser et al., 2019; Suseno & Abbott, 2021). This includes targeted human capital growth in technology applications (Suseno & Abbott, 2021) and digital literacy programs (Thompson & Paul, 2020). When technical competencies are lacking, entrepreneurs compensate for these gaps by utilizing external services, technical assistance, and capacity-building workshops (Suseno & Abbott, 2021).

Social support from family networks, peer mentors, business partners, and state institutions represents another critical determinant of technology adoption (Orser et al., 2019; Suseno & Abbott, 2021). This aligns with findings connecting women's technology adoption to social media integration (Thompson & Paul, 2016, 2020). Additionally, visible female role models in the technology sector positively influence adoption choices (Orser et al., 2019).

Market factors—such as supply chain integration, client communication requirements, and credit access—significantly drive technology adoption among female-owned enterprises across 16 Sub-Saharan African economies (Islam & Muzi, 2022). Notably, these specific market pressures did not exhibit the same level of influence on male-owned enterprises (Islam & Muzi, 2022).

Internal factors, particularly positive user perceptions, significantly enhance technology acceptance among female business owners (Kelly & McAdam, 2022). This reinforces research linking constructive user mindsets to successful technology integration (Serafin et al., 2019). A positive attitude toward technology and intrinsic interest serve as foundational predictors of sustained adoption (Orser et al., 2019; Zhou & Purushothaman, 2015). Abima et al. (2021) observed that user age influences these attitudinal responses, though Thompson and Paul (2020) noted varying attitudinal patterns across qualitative samples from Australia, Chile, and India.

Determinants of behavioral adaptation span individual intention, technical self-efficacy, specialized skill sets, and supportive social environments (Vishkaie, 2018). Income level and digital literacy are similarly strong predictors of technology adoption behaviors (Sultana et al., 2019).

Technical mastery and operational skills consistently determine technology utilization (Dy, 2022; Orser et al., 2019; Zhou & Purushothaman, 2015). Resource accessibility and socioeconomic privilege further moderate adoption capacity (Dy, 2022; Orser et al., 2019). Indeed, resource deficits and resistant attitudes toward technology often stem directly from gaps in technical knowledge (Orser et al., 2019).

Architectural features of digital technology—such as temporal and spatial flexibility—encourage venture integration (Kelly & McAdam, 2022; Thompson & Paul, 2020). This corresponds to findings linking perceived task compatibility with technology adoption (Orser et al., 2019; Zhou & Purushothaman, 2015). Perceived utility increases when software aligns seamlessly with professional requirements (Orser et al., 2019; Thompson & Paul, 2020) and daily routines (Thompson & Paul, 2020). Perceived ease of use and interface convenience remain pivotal (Orser et al., 2019).

Additional technological considerations affecting adoption include privacy protections, cyber security, hardware accessibility, and cross-platform compatibility (Thompson & Paul, 2020). Female adopters emphasize that hardware access alone is insufficient if devices cannot adapt to the dual demands of personal and professional life (Thompson & Paul, 2020). Finally, Abima et al. (2021) highlighted language localization and native-language content as critical factors driving user acceptance.

4. DISCUSSION

This paper synthesized empirical findings on the digital technology adoption of women entrepreneurs through a systematic literature review. Given the sparse research explicitly focused on this domain, structured synthesis is essential for advancing academic discourse. We evaluate these findings against our core research questions:

RQ1: What is the corpus of research related to the digital technology adoption of women entrepreneurs? The published corpus examining women entrepreneurs' digital technology adoption remains narrow. With only 63 studies meeting selection criteria, it is evident that much remains to be explored regarding this topic. Systematic empirical research is required to expand understanding of female digital entrepreneurship.

Furthermore, existing studies lack contextual diversity across geographic and cultural settings. Selected literature heavily reflects conditions in developed economies—with Australia and the United States dominating sample distributions—rendering findings either too context-specific or overly generalized.

Expanded investigation is needed to assess how cultural, regulatory, and economic variations influence digital adoption in emerging markets.

RQ2: What are the major foci of studies related to the digital technology adoption of women entrepreneurs?
Bibliometric and thematic analyses revealed five primary research concentrations: (1) general digital technology utilization by women, (2) individual and social impacts of technology adoption, (3) female participation in IT development, (4) entrepreneurial applications of digital tools, and (5) drivers and barriers influencing adoption choices.

While extant literature addresses diverse thematic areas, current coverage remains fragmented. Future research should examine women's structural roles in software development and technology leadership. Comparative studies analyzing adoption differences between male and female entrepreneurs across diverse regional contexts would yield valuable insights. Additionally, automation risks, job displacement, and digital reskilling demands within female-led small and medium enterprises warrant further empirical investigation.

5. CONCLUSION AND FUTURE DIRECTIONS

This systematic review mapped key themes surrounding digital technology adoption among female entrepreneurs. The relatively small body of identified research highlights significant gaps in current knowledge. To advance the field, future inquiries must expand empirical coverage, evaluate intersectional factors, and explore cultural and geographic nuances influencing digital technology adoption in women-led enterprises.

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MSME POLICY

Identifying Strategies For Successfully Integrating UN Sustainable Development Goals (SDGs) In MSMES Within CentralVisayas And The National Capital Region

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ABSTRACT

This paper identifies strategies to successfully integrate the United Nations Sustainable Development Goals (UN SDGs) in Micro, Small, and Medium Enterprises (MSMEs) within Central Visayas and the National Capital Region through sustainability-related initiatives and/or programs implemented by these enterprises. This is to help grow the economy with MSMEs comprising 99.51% of all enterprises in the country, support the sustainability goals set by the United Nations and support the country's vision for Ambisyon Natin 2040. To identify these strategies, 11 MSME respondents using stratified sampling from each economic sector (agricultural, industrial, service) were asked to answer an online survey. Further details with regards to the sustainability-related initiatives and/or programs they implemented were gathered through focused group discussions (FGDs) with the MSME representative from each economic sector. The result of the study showed that most MSMEs integrate and link the SDGs to their respective business models and strategies at the onset of starting out their enterprise. In relation to this, implementation of the initiatives and/or programs has both positive and negative outcomes but mostly positive outcomes that benefit the MSMEs through increased revenue, positive net income, increased productivity, empowered employees, winning awards, and reducing their overall costs with good financial performance as the top benefit. The factors that contribute to the successful implementation of the MSMEs include effective communication, having clear objectives, crafting strategic programs and/or initiatives, having a strong team, having a good working environment, and having dedicated employees, having a supportive management and enough budget with effective communication being a top success factor. From the findings of the study, it is recommended that focus should be put on supporting MSMEs to help them successfully integrate the SDGs in their operations which would in turn help grow the country's economy. In which case, a policy paper for the constitution and a guidebook for the MSMEs can be made specific to each sector covering effective strategies that they can follow.

Keywords: *Central Visayas*, *Metro Manila*, *micro*, *small*, *and medium enterprises*, *Sustainable Development Goals*, *sustainability*, *strategies*, *United Nations*

1. INTRODUCTION

Micro, small, and medium enterprises (MSMEs) play a significant role in the country's economic growth. They essentially help reduce the level of poverty due to the jobs that they are able to create for the country's working population. A classification of MSMEs or taxpayer types indicated in the Ease of Paying Taxes (EOPT) Law per RR No. 8-2024 based on gross sales net of Value Added Tax (VAT) is shown in Table 1 below.

Table 1. Taxpayer Classification based on EOPT Law (Bureau of Internal Revenue, 2024)

Enterprise Type	Taxpayer Classification Based on Gross Sales net of Value Added Tax (VAT)
Micro	<Php 3,000,000
Small	> Php 3,000,000 but < Php 20,000,000
Medium	> Php 20,000,000 but < Php 1,000,000,000

In the Philippines, MSMEs make up 99.51% (952,969) of all registered businesses and employ over 62.66% (5,380,815 employees) of the working population including women, the youth, and rural people. These organizations make significant contributions to the national economy adding value worth approximately 36% of gross domestic product (GDP) and overseas sales that generate a quarter of export revenues. (Department of Trade and Industry, 2020)

This suggests that a study focusing on MSMEs can significantly add value to the national economy with the Philippine economy growing at a moderate rate over the last two decades. In fact, its annual growth rate is 4.6% from 2000 to 2009 which shot up to 6.4% from 2010 to 2019 (Philippine Statistics Authority, 2020) which significantly moved the gross national income per capita of the country from $1000 in 2000 to $3,160 in 2021 with expectations of further increasing this 2022 (World Bank, 2022).

In relation to the country's economic growth, three major sectors that contribute to it for which the GDP is broadly divided, include the agricultural, industrial, and service sectors. However, the agriculture sector accounted for only around 10% of GDP in 2021 (Philippine Statistics Authority, 2022) which is significantly lower than in the 1980s with the agriculture industry accounting for approximately 25% of the country's GDP. The service sector meanwhile surpassed the industrial sector in terms of contribution to GDP which is at approximately 60% in 2021 as compared to the industrial sector which is at 30.8% (World Bank, 2022).

On top of examining the major sectors which contribute to the country's GDP, a look into the contribution of the different regions and cities in the Philippines would also be useful in identifying which geographic location the study would focus on. In 2020, Quezon City is the top wealthiest city with a record total asset of Php 452.333 billion while Cebu took the top place in terms of wealthiest province in the Philippines with a total asset of Php 213.005 billion (Commission on Audit, 2021). Checking on the ranking of the wealthiest

cities and provinces in the Philippines in 2020 from the Commission on Audit, Cebu remains the wealthiest Local Government Unit (LGU) outside Metro Manila.

With this, the study will focus on MSMEs on each of the major sectors of the Philippine economy, the agricultural, industrial, and service sector, in Central Visayas where Cebu City and Cebu Province is located and in the National Capital Region where most of the wealthiest LGUs are clustered. This is to put specificity of scope for the study which can contribute to the country's aim of growing the economy and improving the standard of living of Filipinos.

In relation to economic growth and the country's vision for improving the standard of living of its citizens, we can look closely into the vision of Ambisyon Natin 2040 for the country which highlights that "By 2040, the Philippines shall be a prosperous, predominantly middle-class society where no one is poor. Our people will enjoy long and healthy lives, are smart and innovative, and will live in a high-trust society." The road to achieving this vision is charted in the Philippine Development Plan 2017 – 2022 and its 10-point socioeconomic agenda which underscores the role of SMEs in helping to increase competitiveness and make it easier to conduct business. (International Trade Centre, 2020)

The vision for Ambisyon Natin 2040 suggests that Filipinos have a comfortable life for which decent jobs that bring sustainable income including opportunities for entrepreneurship must be present which can be possible with a focus on SMEs. Another tenet is that Filipinos are strongly rooted such that there are volunteer opportunities, and Filipinos spend time to serve the community and contribute to various causes which can be possible with integrating sustainability and climate action in the country's businesses and organizations.

Sustainability and climate action has been a long-focused topic worldwide. In fact, to realize the 2030 goal of peace and prosperity for people and the planet, now and into the future, there is a need to contribute to one or a combination of the 17 UN's Sustainable Development Goals (SDGs). This 2030 Agenda for Sustainable Development was adopted by all United Nations Member States in 2015 which is an urgent call for action by all countries, both developed and developing, in a global partnership. Here, it is recognized that ending poverty and other deprivations must go hand-in-hand with strategies to improve health and education, reduce inequality, and spur economic growth while tackling climate change and working on preserving our natural resources (United Nations, 2015).

The UN SDGs have a total of 169 targets in 17 goals which include: (1) No Poverty, (2) Zero Hunger, (3) Good Health and Well-being, (4) Quality Education, (5) Gender Equality, (6) Clean Water and Sanitation, (7) Affordable and Clean Energy, (8) Decent Work and Economic Growth, (9) Industry, Innovation, and Infrastructure, (10) Reduced Inequalities, (11) Sustainable Cities and Communities, (12) Responsible Consumption and Production, (13) Climate Action, (14) Life Below Water, (15) Life on Land, (16) Peace, Justice and Strong Institutions, and (17) Partnerships for the Goals (United Nations, 2015).

Correlating the identified 17 UN SDGs with the different major sectors in the Philippine economy which include the agriculture, industrial, and service sector; it can be noted that each sector can address multiple SDGs as relevant to the type of operations and processes for each sector.

Looking at the significance of the 17 UN SDGs, the nearing target in 2030 and the necessary platforms for coordination and monitoring for sustainability initiatives which is still in its early stage in the Philippines (United Nations, 2019). With this, there is a need to mainstream SDGs in the country's policies to be able support programs, projects and activities related to it which is also in line with Ambisyon Natin 2040 vision for the Philippines.

With this, a study that involves integrating these UN SDGs in one of the biggest enterprise cluster in the Philippines, the small and medium-sized enterprises (SMEs), specifically in Cebu City and Cebu Province which is one of the top wealthiest city and province outside the National Capital Region would contribute to improving the country's economy and support its vision for Ambisyon Natin 2040.-

1.1 Statement of the Problem

The scope of the study for the exploratory research would be within Central Visayas and the National Capital Region (NCR) in the Philippines. Within this geographical scope, it will answer the following research problems:

- To determine how MSMEs consider sustainability in their operations.
- To determine what programs and/or initiatives do MSMEs implement to contribute to the United Nations SDGs.
- To determine how MSMEs benefit from the implementation of sustainability-related programs and/or initiatives.
- To determine the impact of the sustainability-related programs and/or initiatives implemented by MSMEs in terms of contributing to the UN SDGs.
- To determine what factors contribute to the success of the sustainability program/s and/or initiatives implemented by MSMEs.
- To determine what factors contribute to the failure of the sustainability program/s and/or initiatives implemented by MSMEs.

1.2 Rationale of the Study

This exploratory research study is relevant to the needs and trends of the current times due to the following reasons:

(1) The nearing target in 2030 for the UN SDGs worldwide makes it crucial for all countries, from first to third world countries, to support in the achievement of these goals for the people and for the planet.
(2) Necessary platforms for coordination and monitoring for sustainability initiatives are still in its early stage in the Philippines. With this, there is a need to mainstream SDGs in the country's policies to be able support programs, projects, and activities.
(3) The Ambisyon Natin 2040 envisions that Filipinos enjoy long and healthy lives, are smart and innovative, and will live in a high-trust society; this can be further realized with the implementation and adoption of the UN SDGs in the country.
(4) MSMEs are one of the biggest enterprise cluster in the Philippines at 99.51% and integrating the UN SDGs to these enterprises can further help in growing the country's economy, improving the quality of life of the Filipino citizens, and preserving the beauty of the environment.

The results of the study could serve as a point of reference for the creation of a proprietary guide for MSMEs in setting up a Corporate Innovation arm catering to the sustainability-related initiatives supporting advancement of the UN SDGs. In relation to this, a proprietary guide for SMEs in setting up a Corporate Social Responsibility (CSR) Program that supports achievement of at least one of the 17 UN SDGs can also be generated based on the results of the study. In addition to this, at a nationwide implementation of laws and policies, a policy paper with reference to the results of the study can be developed and submitted to the relevant legislative bodies or government agencies focusing on supporting MSMEs to incorporate sustainability-related programs and initiatives in their respective operations and processes.

1.3 Conceptual Framework of the Research Process

The research process is governed by a conceptual framework shown in Figure 1 below which reflects the factors and variables that will be examined. The scope of the non-experimental or observational research study will be within Central Visayas and the National Capital Region (NCR) focusing on the micro, small, and medium enterprises (MSMEs).

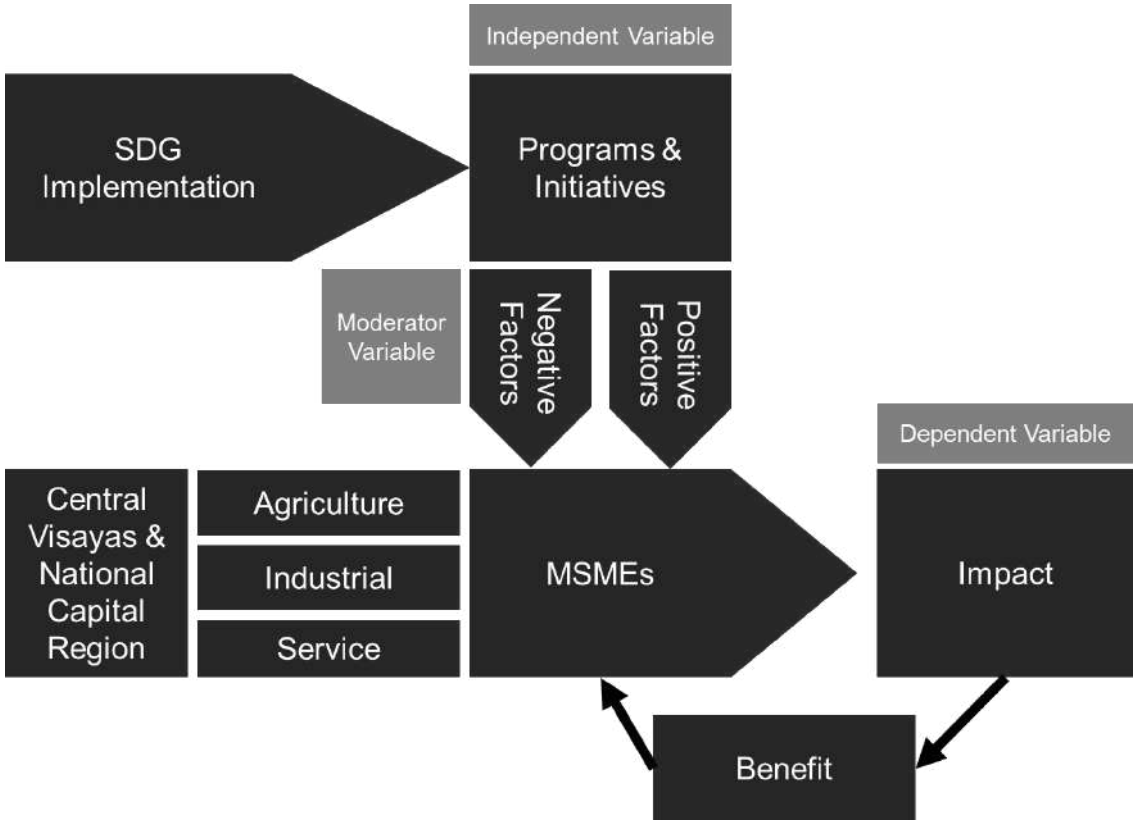


Figure 1. Conceptual Framework for the Examining Strategies on Successfully Integrating the SDGs in MSMEs

Based on the conceptual framework shown in Figure 1, the independent variables are the programs and initiatives of the MSMEs within Cebu City and Cebu Province from each of the three major sectors of the Philippine economy which include the agriculture, industrial and service sector. The moderator variables are both the negative and positive factors that affect the implementation of the programs and initiatives of the MSMEs towards SDG implementation. The dependent variable which would be affected by the sustainability programs and initiatives is the impact towards the financial performance and SDG contribution of the MSME which would in turn benefit it.

1.4 Definition of Terms

Agriculture Sector. A sector of the Philippine economy involved in the growing of crops and raising of farm animals and is ranking third among the sectors as it employs 24% of the Filipino workforce and accounts for 8.9% of the total GDP or GDP (Philippine Statistics Authority, 2023).

Central Visayas. An administrative region in the Philippines designated as Region VII which consists of two provinces Cebu and Bohol, three highly urbanized cities, 10 component cities, and 91 municipalities, and has the fourth largest economy in the Philippines (Philstar, 2024).

Ease of Paying Taxes (EOPT) Law. An act published on the Official Gazette on 07 January 2024 which introduces significant amendments to the National Internal Revenue Code (NIRC) of 1997 that aims to modernize tax administration, update the taxation system to encourage proper and easy compliance by adopting best practices and provide (Bureau of Internal Revenue, 2024).

Gross Domestic Product (GDP). Denotes the aggregate value of all services and goods produced within a country in any given year and is an important indicator of the country's economic power (Statista, 2024). For this study, the GDP indicated is that of the Philippines.

Industrial Sector. A sector of the Philippine economy that encompasses a wide range of economic activities that involve the manufacturing, construction, mining and utilities industry and accounts for 30.8% of the country's GDP (World Bank, 2022).

Initiatives. For the context of this study, initiatives are projects or activities carried out by the functions or individuals in organizations that are aimed at integrating the principles stipulated in the United Nations Sustainable Development Goals (UN SDGs) as applicable to their business.

Micro, Small, and Medium Enterprises (MSMEs). An enterprise engaged in industry, agri-business, and/or services that has less than Php 1 billion in gross sales net of Value Added Tax (VAT) which can further be classified as micro, small, or medium based on gross sales net of VAT as stipulated in Table 1 Taxpayer Classification based on EOPT Law (Bureau of Internal Revenue, 2024).

National Capital Region (NCR). The capital region and largest metropolitan area of the Philippines, and is the country's political, economic, and educational center, densely populated which is home to over 13 million Filipinos subdivided into 17 local government units (LGUs) comprising of 16 cities and one municipality (Department of Trade and Industry, 2024).

Programs. For the context of this study, programs are organized set of initiatives, projects or activities designed to achieve specific objectives towards the integration of the United Nations Sustainable Development Goals (UN SDGs) within a given time frame.

Service Sector. A sector of the Philippine economy that includes a wide range of activities that provides intangible goods and services in the retail, hospitality, transportation, finance, real estate, education, healthcare, and information technology, and accounts for 60% of the country's GDP (World Bank, 2022).

United Nations Sustainable Development Goals (UN SDGs). A collection of 17 interlinked global goals adopted by all United Nations Member States in 2015 to address global challenges including those related to poverty, inequality, climate change, environmental degradation, peace and justice, and are intended to be achieved by 2030 (United Nations, 2021).

Value-Added Tax (VAT). A consumption tax that is imposed on the sale, barter, exchange, or lease of goods and properties and on the importation of goods into the Philippines, with the tax being levied on each stage of the production and distribution process (Bureau of Internal Revenue, 2024).

2. REVIEW OF RELATED LITERATURE

2.1 UN Sustainable Development Goals (SDGs) Worldwide

According to the United Nations Sustainable Development Agenda, implementation, and success of the Sustainable Development Goals (SDGs) will rely on each country's own sustainable development policies, plans and programs that will be led by each country. The Sustainable Development Goals will serve as a compass for aligning the countries' plans with their global commitments. (United Nations, 2021)

In addition to this, nationally owned and country-led sustainable development strategies will require resource mobilization and financing strategies. As such, the stakeholders involved include governments, civil society, the private sector, and other applicable entities which are expected to contribute to the realization of the agenda set for 2030 relating to the UN SDGs. In fact, multi-stakeholder partnerships have been recognized as an important component for strategies that seek to mobilize all stakeholders around the 2030 Agenda for Sustainable Development. (United Nations, 2021)

According to the studies made by the Sustainable Development Solutions Network and Bertelsmann, the Scandinavian countries are at the top in terms of the SDG Index with a scale of 0 to 100, where 0 is the worst level of implementation and 100 means full compliance with the targets. (Sustainability for All, 2019)

2.2 Monitoring of UN Sustainable Development Goals (SDGs) Worldwide

For the 17 SDGs, there are a total of 169 target areas which is monitored and reviewed using 232 global indicators. The global indicator framework developed by the Inter Agency and Expert Group on SDG Indicators (IAEA-SDGs) was agreed by the UN Statistical Commission last March 2016. In which case, the Economic and Social Council as well as the General Assembly have adopted the identified indicators. In relation to this, respective governments of each country will need to develop their own national indicators to aid in monitoring the progress made on the goals and the targets (United Nations, 2021).

2.3 Implementation of UN Sustainable Development Goals (SDGs) National Level

The Sustainable Development 2030 Agenda encourages national target-setting and adaptation of the SDGs into national process, policies, and strategies. With the adoption of the 2030 Agenda, there has been an increase in the number of country level National Development Plans (NDPs) adopted. In fact, the number of countries with an NDP has more than doubled between 2006 and 2018, 62 to 134 (Chimhowu et. al, 2019).

Integration of the SDGs at the national level has rarely gone beyond mapping and reporting (Grainger-Brown and Malekpour, 2019), and it even remains unclear whether these plans can fully reflect the transformative potential of the SDGs.

To achieve the NDPs requires inclusiveness and sustainability considerations to be incorporated into macroeconomic policies and financial regulations, budgeting, trade and investments, economic diversification, and domestic resource mobilization. In this case, the NDPs that can be used for global reporting and policymaking need proper monitoring and adequate reporting, which relies upon effective national planning systems for implementing national development priorities and the SDGs. (Katramiz and Okitasari, 2021)

Currently, the horizontal accountability in monitoring systems remains very limited and efforts are necessary to enable involvement of parliaments, supreme auditing institutions, and national human rights institutions (Breuer and Leininger, 2021).

With this, in the process of aligning with the 2030 Agenda, adopting a whole-of-society approach, engaging Civil Services Organizations (CSOs), local communities, people in vulnerable situations, and the private sector, this could help in localizing the SDGs into subnational planning and implementation. Consequently, a governance framework that aligns the national and sub-national levels can be established. In this way, the sharing of experiences and knowledge as well as improvement of transparency can be facilitated. (Katramiz and Okitasari, 2021)

In addition, a meaningful, safe, and effective stakeholder engagement may also help NDPs capture the complexity of the SDGs by building understanding and consensus among stakeholders. Essentially, collaborative rational process can be potential strategy to be implemented within national development planning as it tends toward a more horizontal rather than hierarchical approach to the planning process (Innes and Booher, 2010).

2.4 Implementation of UN SDGs for Businesses and MSMEs

The targets set for the UN SDGs are ambitious and require transformation of public and private activities which is often associated with adoption of new business models, bringing in new innovation or technology and doing business differently that is more sustainable and ethical. This transformation process provides an avenue and opportunity for the private sector business, most particularly Micro, Small and Medium Enterprises (MSMEs). In fact, according to the Business and Sustainable Development Commission, sustainable business models could open economic opportunities worth USD 12 trillion and create 380 million jobs by 2030, with more than 50% being located in developing countries. (Business & Sustainable Development Commission, 2017).

Overall, in terms of general integration of the SDGs to large business operations, Roosa (2010) indicated that organizations can integrate sustainability specific to its management through the development of sustainability programs consisting of changing the corporate vision and mission, resetting goals and

objectives, identifying, and implementing changes in operational processes and establishing result reporting practices.

3. METHODOLOGY

3.1 Research Design

A qualitative type of research was taken for this exploratory research study, for which data will be gathered through online surveys and focus group discussions (FGDs). A combination of using both online surveys and FGDs addresses all of the research objectives expounded on the Statement of the Problem section (1.D).

The focus group discussion (FGDs) covered determining the details of the sustainability-related programs conducted by MSMEs. Moreover, the factors that contribute to the success or failure of the programs and/or initiatives was also examined. In relation to these factors, specific details on how sustainability is considered in the business operations of these MSMEs were captured.

On the other hand, specific questions in the online survey forms, presence, or absence of the sustainability-related initiatives were identified. Moreover, the impact as well as benefit of the implementation of the sustainability-related initiatives and/or program to the respondent MSMEs were captured through the online survey.

With the exploratory research study covering insights from MSME representatives from each of the major sectors (agricultural, industrial, service), specific goals from the 17 United Nations SDGs were specifically considered for each of the major sectors. However, for the exploratory research study overall, SDG 4 Quality Education and SDG 17 Partnership for the Goals were the relevant UN SDGs addressed. In terms of the relevant UN SDGs for each sector, this is listed in Table 2.

Table 2. Focus UN SDGs per Economic Sector

Sector	UN Sustainable Development Goals
Agricultural	SDG 2 Zero Hunger SDG 5 Gender Equality SDG 8 Decent Work and Economic Growth SDG 10 Reduced Inequalities SDG 12 Responsible Consumption and Production SDG 13 Climate Action SDG 15 Life on Land
Industrial	SDG 5 Gender Equality

	SDG 7 Affordable and Clean Energy SDG 8 Decent Work and Economic Growth SDG 9 Industry, Innovation, and Infrastructure SDG 10 Reduced Inequalities SDG 11 Sustainable Cities and Communities SDG 12 Responsible Consumption and Production
Service	SDG 5 Gender Equality SDG 8 Decent Work and Economic Growth SDG 9 Industry, Innovation, and Infrastructure SDG 10 Reduced Inequalities SDG 11 Sustainable Cities and Communities SDG 12 Responsible Consumption and Production

3.2 Research Setting

With the limitations being brought about by the COVID-19 pandemic, the surveys and focus group discussions (FGDs) were done online. The surveys were administered through Google Forms and the FGDs through Zoom Meetings.

3.3 Research Respondents

As for the online survey, ten (10) MSMEs from the three major sectors which included the agriculture, industrial and service sector, were asked to answer the survey. With reference to World Bank's data for 2021 concerning the GDP contribution of each economic sector, approximately 10% for the agriculture sector, 30% for the industrial sector, and 60% for the service sector; the number of MSME respondents for each sector followed the same percentage. With this, there were one (1) respondent for the agriculture sector, three (3) for the industrial sector, and six (6) for the service sector. Meanwhile, for the focus group discussions (FGDs), there was one (1) MSME representative for each sector. The target number of respondents for each data gathering method (online survey, FGDs) under each sector is illustrated in Table 3.

Table 3 Exploratory Research Respondents per Data Gathering Method and Sector

Sector	Online Survey	Focus Group Discussion	Rationale

	Respondents	(FGD) Respondents	
Agricultural	1	1	~10% contribution GDP
Industrial	3	1	~30% contribution to GDP
Service	6	1	~60% contribution to GDP
Total	10	3	-

3.4 Research Instrument

The online survey was administered through Google Forms which was distributed specifically to the identified enterprise for each sector: agricultural, industrial, and service.

The focus group discussions (FGDs) were administered through organized discussion in Zoom with a representative from each of the three sectors (agricultural, industrial, service) which is taken from the existing pool of respondents who answered the online survey.

3.5 Data Gathering Process

The data gathering process started with identifying MSMEs that were selected to answer the online survey questions with regard to the following: (a) presence or absence of sustainability-related initiatives and/or programs, (b) impact of sustainability-related initiatives and/or programs implementation, and (c) benefit of the implementation of sustainability-related initiatives and/or programs to the enterprise.

Following this, 1 representative from each sector who implemented sustainability-related initiatives and/or programs coming from the MSMEs who answered the survey questions were selected to undergo the focus group discussions (FGDs). With this, the following information and insights were captured during the online discussion: (a) details of the sustainability-related initiatives and/or programs, (b) factors that contribute to the success or failure of the program and/or initiatives, and (c) details about how sustainability is considered in the business operations of the enterprise.

3.6 Analysis of Data

After the data gathering process, the results of the online survey and the online focus group discussions (FGDs) were then analyzed.

As for the online survey, the following results were analyzed: (a) percentage of MSMEs that implement sustainability-related initiatives and/or programs, (b) UN SDGs addressed by the enterprises from each sector for the enterprises that implement sustainability-related initiatives and/or programs, (c) correlation

of the UN SDGs addressed and the type of sector for which the enterprise belong, (d) outcomes of implementing sustainability-related initiatives and/or programs, (e) percentage of MSMEs that have successfully created significant impact through the sustainability-related initiatives and/or programs implemented, and (f) percentage of MSMEs that have failed to create significant impact.

For the case of the focus group discussions (FGDs), the following results were analyzed to bring about significant recommendations on strategies to successfully integrate support for the UN SDGs in the operations of MSMEs: (a) factors that contribute to the success of the programs and/or initiatives, (b) factors that contribute to the failure of the sustainability-related programs and/or initiatives which should be avoided in the implementation, (c) insights on how to successfully implement sustainability-related initiatives and/or program, and (d) best practices to consider in implementing initiatives and/or program that would contribute to the 17 UN SDGs.

4. DATA ANALYSIS

4.1 MSME Respondents Demographics and Geographics

The exploratory research study data gathering was conducted online through surveys via Google Forms and focus group discussions (FGDs) with respondents for each of the three economic sectors – agricultural, industrial, and service. Table 4 shows the planned and actual number of respondents for each economic sector.

Table 4 Planned vs. Actual Number of Survey Respondents per sector

Sector	Number of Online Survey Respondents		% Online Survey Respondents		Number of FGD Respondents	
	Planned	Actual	Planned	Actual	Planned	Actual
Agricultural	1	1	~10%	9.1%	1	1
Industrial	3	4	~30%	36.4%	1	1
Service	6	6	~60%	54.5%	1	1
Total	10	11	100%	100%	3	3

Based on Table 4, it can be noted that the minimum target for online survey respondents of ten (10) MSMEs was exceeded by one (1) respondent in the industrial sector with a total number of 11 online survey respondents.

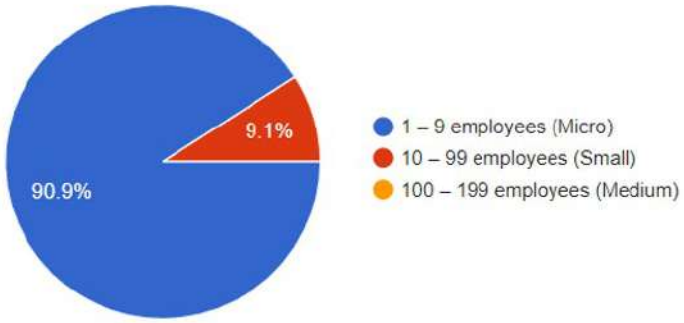


Figure 2 MSME Respondents Profile in Terms of Number of Employees

Looking into the profile of the enterprises who took part in the survey, based on Figure 2, it can be noted that 10 respondents or 90.9% of the respondents are Micro Enterprises with 1 to 9 employees.

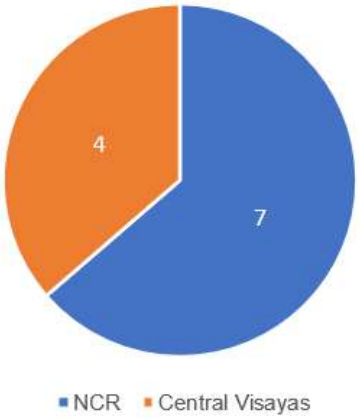


Figure 3 Location of MSME Respondents

Based on Figure 3, it can be noted that majority of the MSME respondents (63.6%) are based in the National Capital Region (NCR) with a total of seven (7) respondents and only four (4) respondents out of the 11 (36.4%) are based in the Central Visayas. In terms of the demographics of the respondents who represented the MSMEs to answer the online survey are majorly the business owners themselves (CEO, Co-founders, Founder, Sole Proprietor, Managing Partner).

4.2 UN Sustainable Development Goals (SDGs) Implementation and Integration

With the 11 MSME respondents, all (100%) indicated that they have sustainability-related programs in their respective enterprises. To dig deeper into what UN SDGs are addressed by the sustainability-related initiatives and programs by the MSME respondents, Figure 4 provides a summary of these supported UN SDGs.

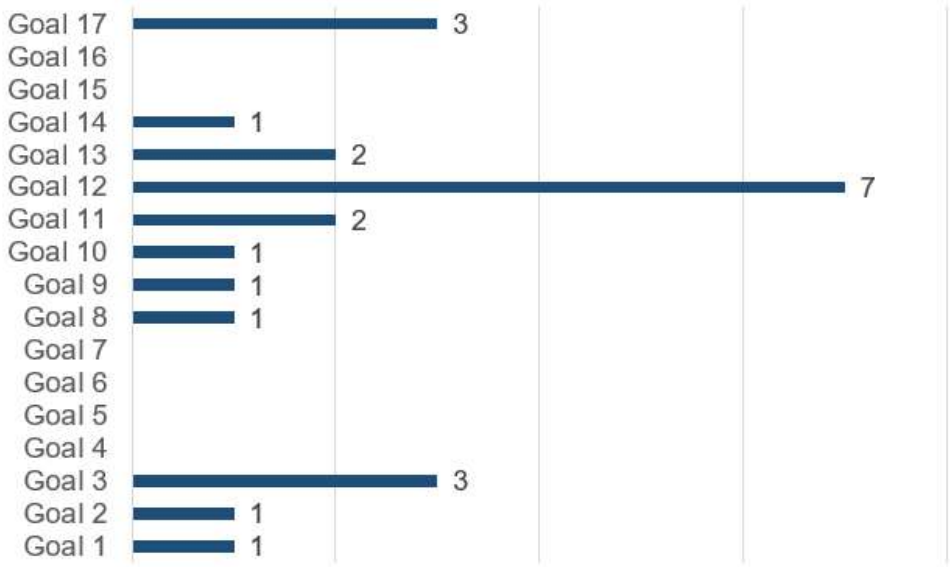


Figure 4 UN SDGs Addressed by MSME Respondents

Based on Figure 4, it can be noted that majority of the MSMEs who participated in the survey (seven respondents) are addressing Goal 12 Responsible Consumption and Production of the UN SDGs which is consistent with the identified focus SDGs per economic sector in Table 2 for which Goal 12 is present in all the economic sectors – agricultural, industrial, and service. In relation to this, focused group discussions with enterprises from each sector reveal that although they may be from different sectors, they are supporting Goal 12 through various initiatives integrated and specific to their operations that ensures either reduction of waste generated and sustainable means of production.

Take for instance the agricultural sector, the selected enterprise reveals that due to the heightened problem of crop wastage in the agriculture sector as well as the inefficiencies and the several layers of distribution from farmers to customers, they are working closely with the farmers to manage what they produce through sustainable farming practices and deliver their produce straight to customers thereby increasing their take home income which in turn not only support Goal 12 Responsible Consumption but also Goal 8 Decent Work and Economic Growth and Goal 13 Climate Action.

For the case of the industrial sector selected enterprise, responsible consumption is practiced in its major business process which is the production of household products from plastic waste that accounts for its contribution to Goal 12. Moreover, with the reduction of plastic waste due to conversion into high-value products, they also noted contribution to Goal 11 Sustainable Cities and Communities.

On the other hand, for the case of the service sector, the selected enterprise' service of providing refill products for consumable items to customer to reduce the usage of plastic packaging accounts for their identified contribution to Goal 11, Goal 12 and additionally Goal 14 Life Below Water owing to the harmful effects of plastics thrown in our country's bodies of water.

It must also be noted that Goal 3 Good Health and Well-being and Goal 17 Partnership for the Goals although not in the identified focus SDGs in Table 2 emerged as two of the most addressed goals next to Goal 12 for the MSME respondents that are mostly in the service sector.

4.3 Impact and Outcomes of UN SDGs Implementation and Integration

The types of initiatives and/or programs that enterprises potentially implement to support sustainability and UN SDGs is indicated in Figure 5.



Figure 5. Initiatives and/or Programs Implemented by MSME Respondents

Based on the results shown in Figure 5, it can be inferred that the majority of the MSME respondents have sustainability-related initiatives that are linked to strategy (63.6%). This further validates the flexibility that MSMEs can take in integrating sustainability concepts in their operations as compared to large organizations due to less hierarchy in its organizational structure.

For the case of outreach and Corporate Social Responsibility (CSR), the MSMEs, particularly the sole small enterprise from the respondents, still identified these as a means in their operations to help achieve the UN SDGs, which has always been a means to implement sustainable solutions particularly those involving humanitarian efforts to support target communities.

On the other hand, clean-ups, internal administrative projects, and internal production projects have not been identified by any MSME as a way of supporting the realization of the UN SDGs. As for the case of the internal administrative projects and the internal production projects, the zero-response obtained for these related initiatives or programs can be due to the limited manpower of MSMEs. This makes them unable to extend extra manpower to create initiatives and programs within their organization as their people are working on lean operations. Nonetheless, it didn't stop them from supporting the realization of the UN SDGs by essentially having their business models based around addressing the issues that needed to be addressed by each of these SDGs thereby linking the sustainability initiatives to their strategy.

For the case of the additional sustainability initiatives and/or programs that are indicated by the MSME respondents which include: (a) sustainable packaging, (b) plastic waste reduction, (c) refill system, and (d) recycling as a product; it is evident that these are essentially the business models of their MSMEs that is essentially aligned or linked to strategy.

In relation to this, the results of the sustainability-related initiatives and/or programs outcome ratings as well as the ratings of the MSMEs to the impact of these outcomes to their enterprise is shown in Figure 6 and 7 respectively.

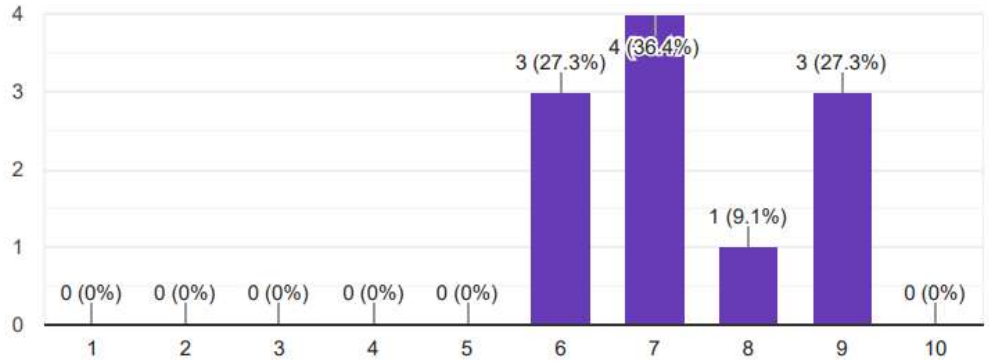


Figure 6. MSME Ratings of Outcomes to Sustainability-related Initiatives or Programs
Rating Scale: 1 – Failure, 10 – Very Successful

Based on the results in Figure 6 which shows the rating of MSME respondents on the outcomes or their sustainability-related initiatives and/or programs, it is evident that majority of the respondents (4 out of 11 respondents, 36.4%) rated 7 with regards to the outcome of their SDG implementation or sustainability-related initiatives and/or programs. With majority of the respondents being business owners of this MSMEs, this suggests that most of the business owners don't see the outcomes of their sustainability-related initiatives and/or programs as very successful yet.

For the case of the representative MSME for the agricultural sector, a certain number of partner farmers and customers acquired, increase in the income of the farmers and reduction of crop wastage including volume delivered needs to be laid out everything first before the MSME business owner can confidently provide a higher rating for the outcome.

The same goes for the representative MSME for the industrial sector for which a target number of upcycled products from plastics must be sold first and a target number of communities that would adapt their upcycling method must be engaged first before the MSME business owner can confidently provide a higher rating for the outcome of their sustainability initiative/

As for the case of the service sector representative MSME, despite providing a slightly higher rating to its outcome as compared to the representative MSME for the agricultural and industrial sector, a target number of customers must still be engaged first in their refilling service before the business owner can confidently provide a higher rating for the outcome.

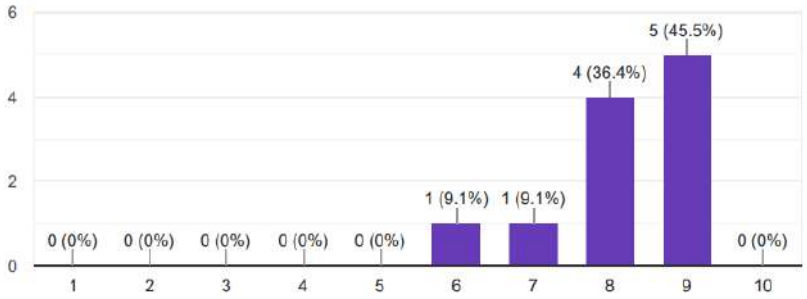


Figure 7. MSME Ratings of the Impact of the Outcomes to Sustainability-related Initiatives and/or Programs

Rating Scale: 1 – No Impact, 10 – Very High Impact

Examining the rating of the representative individuals who is providing a rating for each of their respective MSME, it can be noted that the range of the scores is still 6 to 9 but with a much higher average rating at 8.2 for which majority of the MSME respondents (5 out of 11 respondents, 45.5%) put a rating of 9 for the impact of their outcome. This suggests that although the business owners of the MSMEs don't find their sustainability initiatives and/or programs that much of a success, they are confident to say that they have provided significant impact to their target communities and impact measures despite having a traction that they don't consider as very successful.

Consequently, Figure 8 shows the results of the specific outcomes for the MSME respondents under pre-determined outcomes in the provided online survey.

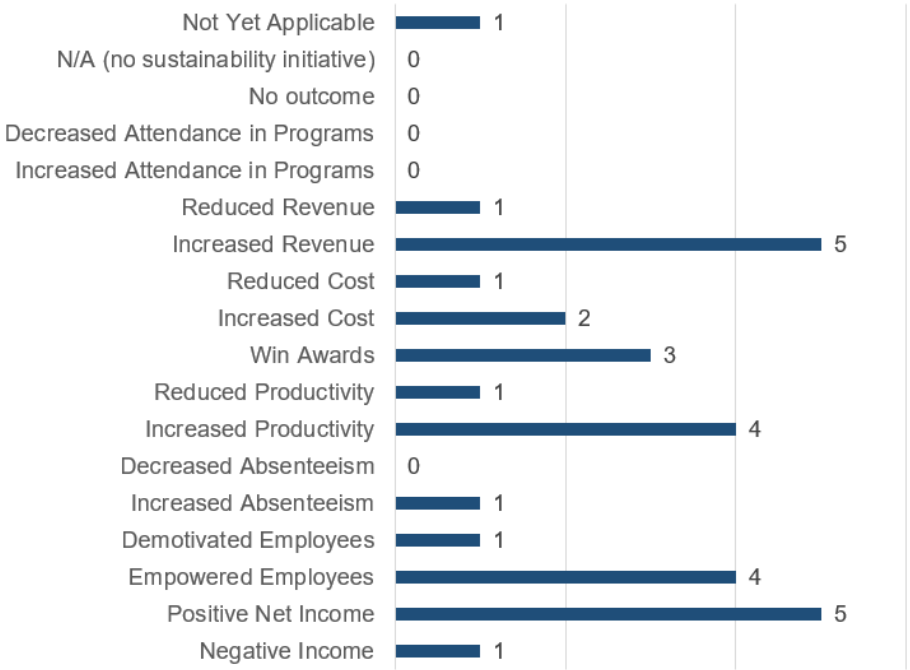


Figure 8. Outcomes of the Sustainability-related Initiatives and/or Programs

Based on Figure 8, it is evident that the outcome of the sustainability-related initiatives and/or program implemented by the MSMEs are majorly on the financial aspect of their business particularly increased revenue and consequently positive net income. Going into the per sector level, referring to the individual online survey results, it is identified that out of the five who choose increased revenue and positive net income as an outcome, 3 out of 5 MSME respondents are from the service sector. This result can be attributed to the fact that the agricultural and industrial sector are heavily affected during these times due to restrictions brought about by the pandemic which affected their operations and sales as compared to the service sector which have the option to provide their service online.

Moreover, increased productivity and empowered employees comes in second to the top outcome. This can be attributed to the fact that as employees become more empowered, they would definitely do their best effort to do their job significantly well thereby resulting in increased productivity.

Winning awards comes in next as identified to be experienced by three (3) MSME respondents. During the FGDs, the representative MSMEs from each of the different economic sectors noted that there is a significant increase in the number of opportunities available for MSMEs and startups in all three sectors in the Philippines both within and outside the country. This is due to the fact that all pitching competitions, incubation, and accelerator programs are going online.

Although majority have pointed out fairly positive outcomes in terms of financial aspect and productivity and people aspect, two (2) MSME respondents experienced increased cost due to implementation of sustainability-related initiatives and/or programs which is relatively normal if the enterprise is just starting out as pointed out by the representative MSMEs during the FGDs.

Other than the ones previously mentioned which are fairly positive, one (1) MSME also experienced a set of negative outcomes in the implementation of its sustainability-related initiatives and/or programs which include: (a) reduced revenue, (b) reduced productivity, (c) increased absenteeism, (d) demotivated employees and (e) negative income.

4.4 Factors Affecting Success or Failure of UN SDGs Implementation and Integration

This section examines the factors that contribute to the success or failure of the UN SDGs implementation and integration initiatives of the MSME respondents and expounds on each of these factor from the inputs gathered during the FGDs.



Figure 9. Factors that Contribute to the Success of Sustainability-related Initiatives and/or Programs

Based on Figure 9, it can be noted that effective communication is one of the major reasons or factors identified for the success of the SDG implementation and integration done by the MSME respondents. Effective communication has been very vital to their respective enterprises as it spells the difference on the following areas: (a) letting their supporters understand the mission and sustainable impact that they are trying to address with their solution, (b) making their team understand the goal that they are trying to achieve and the impact that they are trying to make, and (c) spread the word out about their product so that more people can hear about them and in turn help the enterprise scale and grow.

In addition to effective communication, six (6) MSME respondents each have identified that having clear objectives for the programs or initiatives as well as developing strategic programs or initiatives are two of the factors that help contribute to the success of their implementation. With this, because of the limited manpower of MSMEs as all are working on lean operations, the only way that these enterprises can successfully implement initiatives to support the UN SDGs is to make it as their business model such that the product or service that they are offering is already supporting realization of the UN SDGs.

Having a strong team handling the initiatives and programs is also a major contributor to the success of the UN SDG implementation. The importance of having the right set of people who are passionate and skilled enough to do what needs to be done to be able to achieve the set of objectives and goals they have set for the enterprise. They recognized how important it is to have the right people onboarded may it be in the Co-founding team or as part of its operational staff. That is why, the representative MSMEs in the FGDs pointed out that whenever they onboard people to join the team, they ensure that they not only have the right skills but even more important is that they have the right attitude and passion to execute.

On top of the previously mentioned factors affecting success of the implementation, having a good working environment, dedicated employees and supportive management takes in the third spot which is essentially all human-resource related. This goes to show how important it is to have the right set of talents and at the same time a conducive working environment for which they can thrive and be motivated.

Quite surprising, although important, enough budget only came in fourth in ranking and essentially the last in rank of the factors identified that contributed to the success of their implementation. This can be attributed to the fact that money is not the sole basis alone for successfully implementing. MSMEs continuously look for ways to acquire enough budget to scale and grow their sustainability solution. However, the funding that they have obtained can only do so much in terms of increasing their enterprise traction.



Figure 10. Factors that Contribute to the Failure of Sustainability-related Initiatives and/or Programs

It is evident in Figure 10 that the major reason why the implementation is unsuccessful is that there is not enough budget. This is contrary to what is shown in Figure 9 with enough budget being at the bottom in terms of the role it plays in successful implementation. Hence, although enough budget is not the very major factor that helps contribute to successful implementation, not having enough is the most likely reason why failure of implementation occurs. It was pointed out that for MSMEs who are majorly operating on a bootstrap, enough budget is one of their top priorities since it will drive bringing in the right people to the team through the right recruitment process. Which essentially leads to another top factor affecting the failure of implementing the sustainability initiatives which is having a weak team handling the initiatives and/or programs. This is because execution is the name of the game as it would drive the MSMEs to deliver their required objectives and results.

Next to these two factors that contribute to failure of implementation is ineffective communication. It is identified previously in Figure 9 that effective communication is the top factor for success of implementation. With this, it goes without saying that having ineffective communication would result to failure of implementation due to a number of reasons which was identified during the FGD sessions which include the inability to let their team understand the gravity of work that they need to do to be able to gain traction which is needed to gain the support of outside funders and investors. Consequently, working already with minimal traction at present, they have identified as well that the inability to effectively communicate the impact that they are trying to accomplish makes it difficult for them to gain the support of relevant stakeholders such as outside funders and investors to help them scale.

Unclear objectives for the programs and/or initiatives is also another factor that is identified to cause failure of successful implementation. A representative MSME for one sector pointed out that because of several pivots driven by funding received for which they have specific set of requirements to fulfill and having not so ideal market acceptance for which they need to reassess their solutions, they are faced with the problem of having unclear set of objectives to guide them on what to do. In which case, the activities that they do are usually on a defensive mode to continually run their startup based on the opportunities that are coming instead of having it on an offensive mode for which they have set the direction on what their enterprise is set out to do.

The last of the ranking of factors that were identified to result in failure of implementation include unaligned programs and/or initiatives, bad working environment, uninterested employees, and unsupportive management team. As for the case of unaligned programs and/or initiatives, this was identified as a resultant of the unclear objectives that the management team have set out for those who have experienced a few negative outcomes. The bad working environment and unsupportive management team was identified by the survey respondent which is the staff of the small enterprise (10 to 99 employees) that is part of the MSME respondents. With this, from the perspective of the team outside the top management, despite having positive net income and empowered employees, in terms of sustainability-related initiatives, the outcome is far from ideal since its increase in capacity and scale makes it difficult to put focus on addressing the UN SDGs which they have not considered to begin with.

With this, it can be inferred that for the MSME respondents, those that are in the level of micro enterprises with a lean team and who started their enterprise already with the aim of addressing the UN SDGs tend to be the ones that shows a relatively higher rating for the outcomes of implementing sustainability-related initiatives and/or programs. However, for those enterprises that are already scaled such as the small enterprises with 10 to 99 employees, sustainability-related initiatives and/or programs may be hard to implement if they have not started their business and aligned their business model at the beginning to address any of the UN SDGs.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

Based on the results obtained and the analysis conducted from the findings of the online survey answered by 11 MSMEs respondents and the inputs from the FGDs from representative MSMEs of the agricultural,

industrial, and service sector, the following conclusions were generated from the exploratory research study concerning integrating the UN SDGs in the operations of Micro, Small and Medium-sized Enterprises (MSMEs):

(a) Micro enterprises (1 – 9 employees) integrate sustainability-related initiatives and/or programs at the inception of the enterprises with business models already aligned to addressing the UN SDGs that are relevant to their belonging industry and sector.

(b) Small enterprises on the other hand that did not have their business model aligned to addressing the UN SDGs at the beginning resort to outreach and corporate social responsibility (CSR) to support in addressing the UN SDGs and consider incorporating the sustainability-related initiatives and/or programs in their operations once they have achieved a significant level of scale.

(c) The specific goals addressed by the MSMEs with respect to the 17 UN SDGs are dependent on the nature of processes and operations of their belonging industry and sector.

(d) Most MSMEs integrate the UN SDGs to their operations by having programs that are "linked to their strategy" correlating to the fact that they start out their enterprise with the goal of addressing UN SDGs that relevant to their belonging sector and industry most of which is in the business of addressing the plastic waste problem either through using sustainable packaging, refilling consumable products, and/or recycling as a product.

(e) MSMEs rate the impact that their outcome have created in addressing their target UN SDGs relatively higher than the outcomes that they have experienced from implementing sustainability-related programs and/or initiatives due to the fairly modest traction achieved by the MSMEs which are still micro enterprises and are still at their early focused on continuously validating their sustainability solution and product-market fit.

(f) MSMEs mostly benefit from the implementation of sustainability-related programs and/or initiatives through several positive outcomes which include increased revenue, positive net income, increased productivity, empowered employees, winning awards, and reducing their overall costs.

(g) Good financial performance are at the top of the benefits and positive outcomes experienced by MSMEs through the implementation of sustainability-related initiatives and/or programs such as increase in their revenue and a positive net income.

(h) Though fairly few and execution-specific, MSMEs also experience a share of negative outcomes during the implementation of their sustainability-related initiatives and/or programs which include reduced revenue, increased cost, reduced productivity, increased absenteeism, demotivated employees, and negative income.

(i) The successful implementation of the MSMEs for their sustainability-related programs and/or initiatives can be attributed to factors such as effective communication within and outside their organization, having clear objectives for the program and/or initiatives, crafting strategic program and/or initiatives, having a strong team handling the programs and/or initiatives, having a good working environment, and having dedicated employees that are part of the team, having a supportive management and enough budget to be able to implement these programs and/or initiatives.

(j) Effective communication both within and outside the enterprise is seen as the most important factor to consider in the successful implementation of the enterprise' sustainability-related programs and/or initiatives. Effective internal communication leads to better alignment of the team in terms of the goals that need to be achieved and the level of commitment and passion required to be able to successfully implement their strategies, programs and/or initiatives.

(k) The failed implementation of the MSMEs for their sustainability-related programs and/or initiatives can be attributed to factors such as not enough budget, weak team handling the programs and/or initiatives, ineffective communication both within and outside the organization, unclear objectives for the programs and/or initiatives, unaligned programs and/or initiatives, bad working environment, uninterested employees, and unsupportive management team.

(l) Not having enough budget and weak team handling the programs and/or initiatives are seen as the top factor or reason why MSMEs fail to implement their sustainability-related programs and/or initiatives successfully and effectively. With most MSMEs operating on a bootstrapped funding, not having enough budget is seen as one of the top reasons why MSMEs fail to execute their sustainability solutions, initiatives, and programs as it would be unable to pay for the resources needed to implement both in materials and manpower. With MSMEs having limited manpower working on lean operations, they could not afford having a weak team that is handling the programs and/or initiatives which can be equated to their main business model already. Having the right team with the right skills and attitude is seen as the most important resource for MSMEs.

5.2 Recommendation

Based on the conclusions for the exploratory research study itemized in Section 5.B, recommendations were made for the Micro, Small, and Medium-sized Enterprises (MSMEs) in the implementation of their sustainability-related initiatives and/or programs and for the researchers who would be making further studies and reports in this area to better support implementation of the UN SDGs in MSME. These are expounded in the succeeding subsections.

Recommendation for MSMEs

(a) MSMEs who are still at the early stages of running their enterprise should integrate the UN SDGs relevant to their respective industry and sector in their business models and product or service offerings.
    a. For the case of the agriculture sector, the following UN SDGs can be taken into consideration: SDG 2 Zero Hunger, SDG 5 Gender Equality, SDG 8 Decent Work and Economic Growth, SDG 10 Reduce Inequalities, SDG 12 Responsible Consumption and Production, SDG 13 Climate Action, and SDG 15 Life on Land.
    b. For the case of the industrial sector, the following UN SDGs can be taken into consideration: SDG 5 Gender Equality, SDG 7 Affordable and Clean Energy, SDG 8 Decent Work and Economic Growth, SDG 9 Industry, Innovation, and Infrastructure, SDG 10 Reduce Inequalities, SDG 11 Sustainable Cities and Communities, and SDG 12 Responsible Consumption and Production.
    c. For the case of the service sector, the following UN SDGs can be taken into consideration: SDG 1 No Poverty, SDG 2 Zero Hunger, SDG 3 Good health SDG 5 Gender Equality, SDG 8 Decent Work and Economic Growth, SDG 9 Industry, Innovation, and Infrastructure, SDG 10 Reduce Inequalities, SDG 11 Sustainable Cities and Communities, SDG 12 Responsible Consumption and Production, SDG 14 Life Below Water, and SDG 17 Partnership for the Goals.

(b) MSMEs who already have significant scale and whose business model did not start out as aligned to the UN SDGs, should implement Corporate Social Responsibility (CSR) activities that address any of the 17 UN SDGs that is relevant to their industry and sector.

(c) MSMEs should re-evaluate their strategies, mission, and vision on a yearly basis and continuously monitor their impact measures to ensure that they are continuously addressing their target UN SDGs through the implementation of their sustainability-related initiatives and/or programs.

(d) MSMEs should develop clear objectives for the strategic sustainability-related programs and/or initiatives they planned to implement in their enterprise.

(e) MSMEs should effectively communicate within their organization their commitment to achieving their set objectives as well as their small and big win when these targets are achieved to further empower employees that can result in better outcomes for the MSME in relation to the sustainability-related initiatives and/or programs they have implemented.

(f) MSMEs should also effectively communicate outside their organization the significant traction that they were able to achieve for the case of potential funders and investors, as well as the impact that they were to provide particularly to their target beneficiaries. This is to help provide awareness about the good thing that they are doing to gain support and earn the trust of their target beneficiaries.

(g) MSMEs should ensure setting up the right set of people with the right skills and attitude to execute their sustainability-related initiatives and/or programs.

(h) MSMEs should allocate enough budget to execute the plans that they have set out to effectively implement their respective sustainability-related initiatives and/or programs.

(i) MSMEs should strive to maintain a good working environment for its people as well as a supportive management team to ensure the success of their sustainability-related initiatives and/or programs.

Recommendations for Further Studies and Reports

(a) To extend the scope of the study not only to Central Visayas and the National Capital Region but including other regions as well in the Philippines.
(b) To gather as much respondents as possible for each sector based on a stratified sampling technique to better get a full grasp of identifying the strategies needed to successfully implement sustainability-related initiatives and/or programs that would integrate the UN SDGs in the operations of MSMEs.
(c) To hold focused group discussions to a higher number of MSME representatives based on an identified percentage of the total respondents for each sector - agricultural, industrial, and service.
(d) Generate a proprietary guidebook detailing the effective strategies that MSMEs can successfully implement sustainability-related initiatives and programs in their operations that addresses the UN SDGs including risk management considerations specific to each sector – agricultural, industrial, and service.
(e) Generate a policy paper for submission to relevant legislative bodies focusing on supporting MSMEs to be able to successfully implement sustainability-related programs and/or initiatives in their operations.

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MSMEs Diagnostic Framework: Basis For Policy Development

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ABSTRACT

Sustaining and developing MSMEs is the responsibility of the owner and manager for single proprietors, while organizations like associations and cooperatives are shared responsibility of both the manager/chairman and the member of the organization. Although the government has a variety of programs and projects to assist the MSMEs, they have been found generally sluggish. Government support and intervention will only be effective if they can provide it appropriately to their operations. Thus, in crafting policies on creating program and project support, a framework of diagnosis or protocol must be considered. The available literature discloses rare studies about business diagnosis or studies that examine the health condition of the firms. Most of them were conducted to assess and evaluate business performance and organizational diagnosis. The study aimed to: review the conceptual and theoretical framework, make a business diagnostic guide, formulate a conceptual paradigm and apply it to selected MSMEs, and frame business diagnosis or protocol as basis for policy development. The formulated conceptual paradigm was applied to selected manufacturing MSMEs assisted by the Department of Science and Technology (DOST) on their flagship program, the Small Enterprise Technology Upgrading Program (SETUP) for single proprietors and Grants-In-Aid (GIA) for cooperatives and other community-based enterprises from the province of Marinduque. Mixed (qualitative and quantitative) methods research design and purposive sampling technique were used. Findings revealed that out of the 35 MSMEs composed of 13 GIA and 18 SETUP beneficiaries; almost 40% belong to small enterprises and are among the top performers. As to the function of management, controlling was less implemented and overlooked by most of the GIA projects, while as to operational function, human resource was among the non-prioritized areas. There were enough facilities and equipment, however, the equipment did not meet their needs, resulting in it being underutilized and stored in their area. The present environment favors the development and expansion of MSMEs considering the growing tourism potentials of the province. The SETUP project is more vulnerable to external factors such as technological, socio-cultural, and economic. SETUP and GIA projects have significant differences as to their experiences, and significant relationship to internal factors, external factors, and performance. Among the constraints experienced were: limited working capital, lack of market, technical and production problems (slow production and tedious process, number of rejects during the early stage of the project, inappropriate equipment and tools), high turn-over of workers, difficulties in managing people, and lack of committed employees and members of the organization. Managing daily operations of the enterprise is critically influenced by the type of business organizations. As a result of the analysis, a Work Involve Notify Develop (WIND) framework or protocol to diagnose MSMEs as an aid in crafting intervention was developed. Hence, it's high time for our policymakers to review and evaluate programs and projects intervention assisting MSMEs, especially the grant projects to community-based enterprises.

Keywords: MSMEs policy development, diagnostic framework, protocol to diagnose, Grants in Aid project

1. INTRODUCTION

Martin H. Fischer, a German-born American physician and author once said that "*diagnosis is not the end but the beginning of a practice.*" In the same line of thought, Insight Consulting Limited (2015) also affirmed that "*business diagnostics works a bit like the medical diagnosis of human beings, it can be undertaken after symptoms have emerged or as routine check-up to identify problems before they get out of hand*". In medicine, early detection of problems helps make "treatment" easier and less expensive. This concept of diagnosis in medical terms can be a basis in assessing and evaluating the health conditions of business operations like that of MSMEs.

The vital contribution of a vigorous and healthy micro, small, and medium-sized enterprise (MSMEs) sector to the national economy and social progress of countries across the world has been widely recognized. In developing economies like the Philippines, MSMEs play a critical role. In view of the essential nature of MSMEs activity, the overall aim of the research study is to diagnose the well-being of the business enterprise and develop a framework of diagnosis or protocol as basis for crafting treatment or strategies that sustain MSMEs healthy business operations. This is because available literature discloses rare studies about business diagnosis or studies that examine the health condition of the firms. Most of them were conducted to assess and evaluate business performance and organizational diagnosis.

It is essential to increase the MSMEs contributions by maintaining their healthy and productive operations, thus enabling them to play a more vital role in economic development. Nowadays, making and preparing policies and guidelines by our law makers were backed-up by reliable data and information as an output of research. Hence, it's high time for our policy makers to review and evaluate programs and projects intervention assisting MSMEs most specially grant projects to community-based enterprises.

2. OBJECTIVES

The study aimed to review the conceptual and theoretical framework, make a business diagnostic guide, formulate a conceptual paradigm, and apply it to selected MSMEs. It also aimed to frame a business diagnosis or protocol as a basis for policy development. Specifically, the paper endeavored to: 1. apply the formulated conceptual paradigm to selected manufacturing MSMEs assisted by the Department of Science and Technology (DOST) on their flagship programs, the Small Enterprise Technology Upgrading Program (SETUP) for single proprietors, and Grants-In-Aid (GIA) for cooperatives and other community-based enterprises from the province of Marinduque; 2. analyze and evaluate the formulated conceptual paradigm; and 3. Develop a diagnostic framework for formulating policy interventions in assisting and helping MSMEs.

3. METHODOLOGY

First, a systematic analysis of the literature was used to formulate a conceptual framework in diagnosing the well-being of the participating MSMEs. Using the formulated framework, the lived experiences of the owner/manager in relation to MSMEs operations and management was assessed through the phenomenology window. Participants included randomly selected top management officials, eight from GIA and another eight from SETUP. Structured and unstructured interviews were done using a set of questions that elicited answers about their lived experiences. Field visits and inspections of the production areas and sites were also done. Verbatim transcription was applied in transcribing data. Analysis was done using a thematic approach. As part of credibility procedures, the transcribed data were sent back to the co-researchers to elicit their reactions toward the researchers' reconstructions of the transcribed interviews.

Through descriptive method, inferential statistics was used in analyzing primary and secondary data; one of which is the status of the MSMEs. The research study was conducted in the province of Marinduque, covering the six municipalities, namely Boac, Mogpog, Santa Cruz, Torrijos, Buenavista, and Gasan. The sample of the study was based on the DOST-Marinduque Assisted Projects as of 2016. Assistance being provided by DOST to the MSMEs comes from two types of assistance namely: Grants-in-Aid (GIA) for groups while Small Enterprise Technology Upgrading (SETUP) for individuals. Purposive sampling was used in the selection of respondents. It involves having one or more specific predefined groups. Participants in this study were selected based on the following criteria: a) business establishments registered in the 6 municipalities of Marinduque and are categorized as MSME; b) established operation for about 3 years; c) recipient of DOST GIA and SETUP project for about three years; and d) involved in Manufacturing. The number of qualified participants is 35 MSMEs with 105 respondents consisting of owners,fficers, board of directors, managers, and employees.

To obtain reliable and valid information, a self-made survey questionnaire and guide questions validated by experts were used. To test the reliability of the research instruments, a pilot study was carried out. The questionnaire was specifically tested for internal consistency reliability using Cronbach's coefficient alpha. The results of the tests showed an alpha value of 0.980 which indicates excellent consistency and majority of the factor analysis for all the parameters for each of the variables result in one component.

4. RESULTS AND DISCUSSIONS

4.1. Review of Concept

According to Insight Consulting Limited (2015), business diagnostics works a bit like the medical diagnosis of human beings: it can be undertaken after symptoms have emerged or as routine check up to identify problems before they get out of hand. As in medicine, early detection of problems helps make "treatment" easier and less expensive.

Diagnosis has important implications for patient care, research, and policy. Diagnosis has been described as both a process and a classification scheme, or a pre-existing set of categories agreed upon by the medical profession to designate a specific condition (Jutel, 2009). When a diagnosis is accurate and made in a timely manner, a patient has the best opportunity for a positive health outcome because clinical

decision making will be tailored to a correct understanding of the patient's health problem (Holmboe and Durning, 2014). In addition, public policy decisions are often influenced by diagnostic information, such as setting payment policies, resource allocation decisions, and research priorities (Jutel, 2009; Rosenberg, 2002; WHO, 2012).

This concept of diagnosis in medical terms can be a basis in business for assessing and evaluating the conditions of the business operations. Business diagnostic may refer to an activity or a tool used to carry out the activity and there are different tools for different jobs (Leyserman, 2011). Some diagnostic tools are quick and dirty questionnaires while others are elaborate exercises with scientifically validated outcomes. Diagnostics range from a general business health check through to drilling down into a multitude of specific business areas.

4.1.1. Conceptual Framework

All MSMEs are facing increasing pressure for higher levels of productivity, return on investment, shareholder value and other measures of performance to sustain healthy business operations. To help navigate the way, many business organizations use simple tools that help to generate knowledge, develop understanding, and identify action. Among the models was PRIMO-F by Morrison, a research work from the Durham University Business School (DUBS), looking at what makes an organization and its management effective. This research demonstrated that an effective organization needed to fulfill the following equation: Organizational Growth Effectiveness = Performance x Potential**.** Where "Performance to date" (FiMO) included: Finance, Marketing and Operations and "Potential for the future" (RECoIL) included: Resources, Experience, Controls and Systems, Innovation and Leadership. PRIMO-F refers to: People, Resources, Innovation & Ideas, Marketing, Operations, and Finance. Refer to Figure 1 below.



Figure 1: PRIMO-F Diagnostic Model

The 2014 book of the International Trade Centre (ITC), titled "A Guide to Diagnose a Business and Its Management," identified that business diagnostics is a multistage process from diagnosis to practice as shown in Figure 2 below:

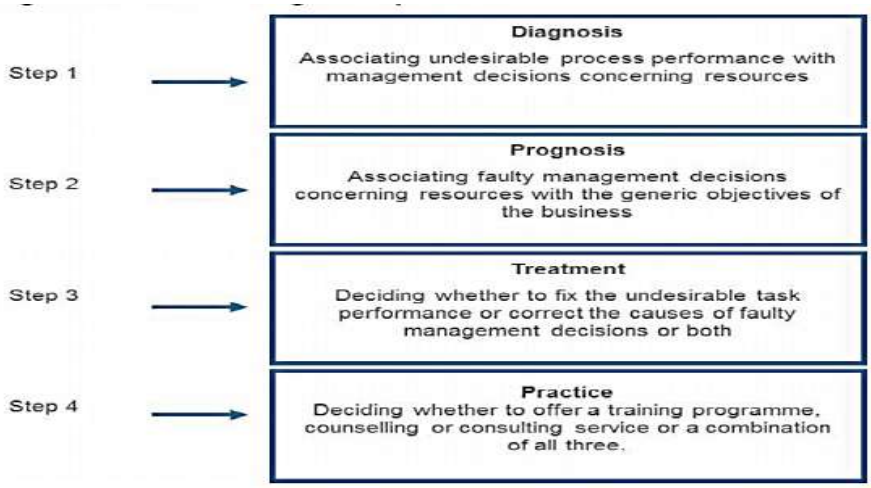


Figure 2: Business Diagnostic Process

According to Synergistic Intelligence 2019, every organization has a unique and challenging context, any consulting and training initiative must begin with an accurate diagnosis. Readiness and effectiveness to change is a multi-dimensional issue and must be properly reviewed to forge a solid partnership by key stakeholders to bring about change. Diagnostics approaches & dimensions shown in Figure 3.

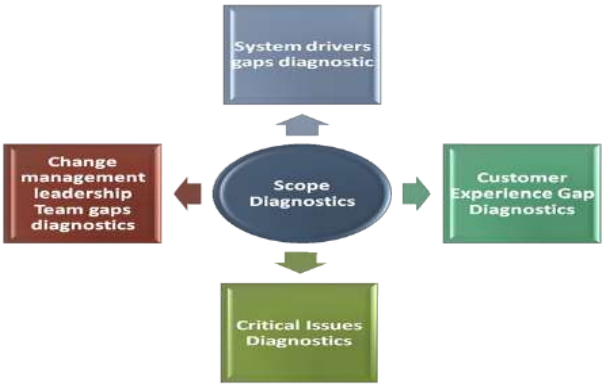


Figure 3: Diagnostics Approaches and Dimensions

Mimick et al.'s (2015) book, titled Business Diagnostics 3rd Edition, highlights the business diagnostics overview framework as shown in Figure 4.

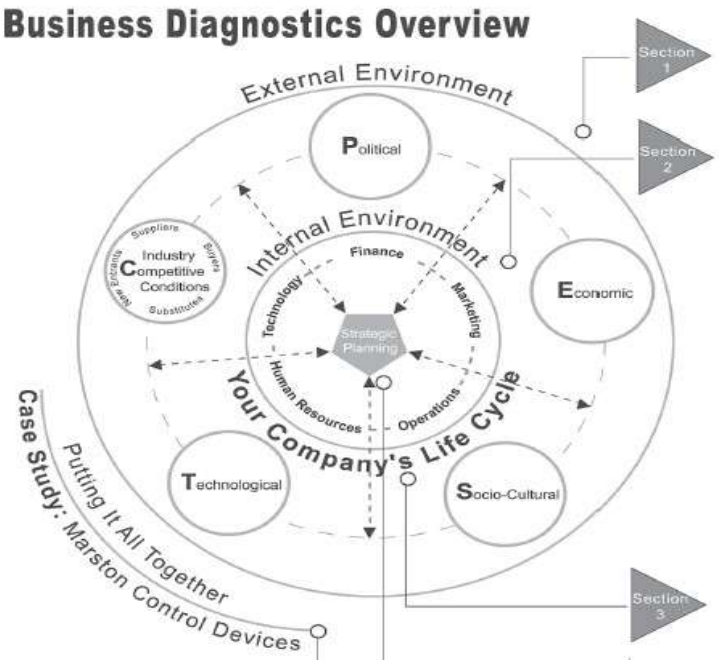


Figure 4. Business Diagnostics Overview Framework (Mimick et.al, 2015)

4.1.2. Making Business Diagnostic Guide

To facilitate the diagnosis of the selected MSME's, the study commenced with the following activities:

4.1.2.1. Preliminary diagnosis is a qualitative study employing face to face interview, field visits and observations on how the owners establish the enterprise and what are their experiences in managing daily operations of the business. It determines the situation of the MSMEs. This identifies symptoms of under-performance and establishes causal linkages between those symptoms and enterprise performance. As part of the lived experiences of the owner/managers, information was gathered on the constraints and challenges faced by the MSME's that affect their growth, potentials and opportunities that would help sustain and enhance their performance.

4.1.2.2. Internal Diagnosis is a quantitative study that evaluates the owners/managers in performing management functions as to: planning, organizing, leading, and controlling. It also includes the management practices commonly displayed by the MSMEs in the following operational business functions: marketing (product, price, place, and promotion); production (production process, raw materials and supplies, facilities & equipment, purchasing and inventory management); financial (record keeping and management, profitability, liquidity, leverage); and human resource (hiring and firing, incentives and benefits, performance evaluation, training, and development). MSMEs performance was evaluated using a survey questionnaire with the following indicators: sales, production, and income generation.

4.1.2.3. External Diagnosis employed quantitative study to analyze how macro-environmental factors affect operations of the MSMEs in the province. It used PEST (Political, Economic, Social,

and Technological) Analysis as a guide in determining the effects. Based on the above literature it was considered in crafting the components of internal and external diagnosis as shown in Figure 5.

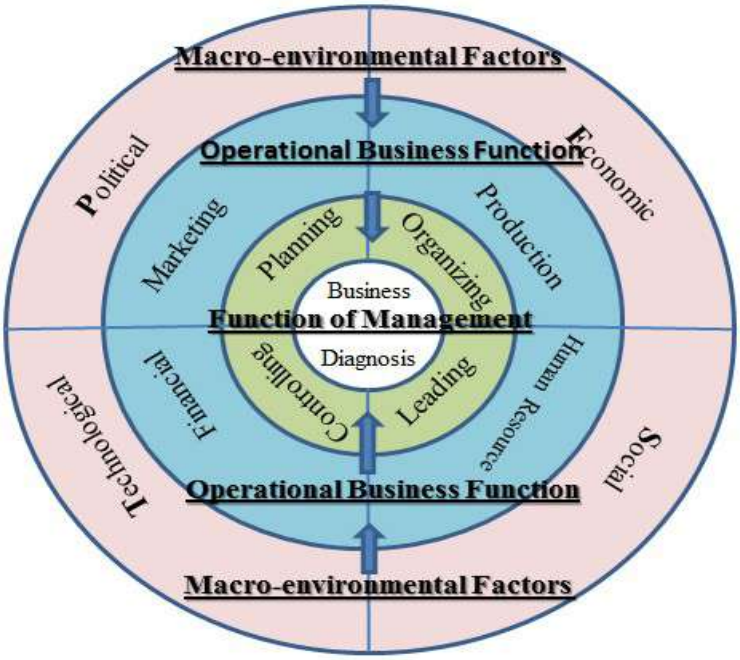


Figure 5. Components of Internal and External Diagnosis

4.1.3. Formulate Conceptual Paradigm

ITC's (2014) book, titled "A Guide to Diagnose a Business and Its Management," identified that business diagnostics is a multistage process from diagnosis to practice. The study recognized that MSMEs have different needs thus making a more tailored fit diagnostic approach needs to be applied through the following:

4.1.3.1. Preliminary diagnosis. The research utilized a qualitative approach that entailed a face-to-face interview using structured and unstructured questions to MSME owners/managers, including ocular inspections and observation of the selected enterprises. It was important to collect the lived experiences of MSME owners to determine how they managed the daily operations, challenges, output performances that affected the short term and long-term goals and opportunities of the MSMEs.

The study acknowledged the complexities of the MSMEs business behavior, resulting to the adoption of multi-phased approach initial diagnosis to completely investigate the composition of the MSMEs performances, transparency, business practices and others. The study applied an accurate pre-diagnosis method, using the *b*usiness diagnostic process that provided the definite and current assessment of the strengths and weaknesses of MSMEs to formulate the appropriate

recommendations, improvement and innovations needed by the MSMEs (International Trade Centre, 2014).

4.1.3.2. Prognosis. After the triangulation report from the convergent-parallel approach, a more critical assessment of the MSME performances in Marinduque would be available. This provided greater awareness of the current health either positive or negative in relation and influences of different and variable internal and external factors of the MSMEs (Al Saleh, 2016).

4.1.3.3. Treatment. Once the current health of the MSMEs performances had been identified, intervention procedures that addressed performance issues, lacking entrepreneurial and management skills, inappropriate infrastructures and regulated hostile external environments (Mabhungu, 2017) were formulated. Included in the intervention programs was to develop an effective performance measurement system in the form of a diagnosis framework that shall serve as diagnosis protocol framework for MSMES. This would address holistic government intervention procedure of any government agencies to craft appropriate treatment or strategies to ensure sustainability, opportunities, and catalyst for local business development programs for MSMEs.

Figure 6 shows the conceptual paradigm towards framework of diagnosis or protocol. The result of which can be a tool for catalyzing local business development opportunities and economic growth of the province. The main output therefore is a framework of diagnosis or protocol as a basis in crafting appropriate treatment or strategies that sustain and enhance the capability of MSME's which can be eventually used by government agencies in developing appropriate interventions.

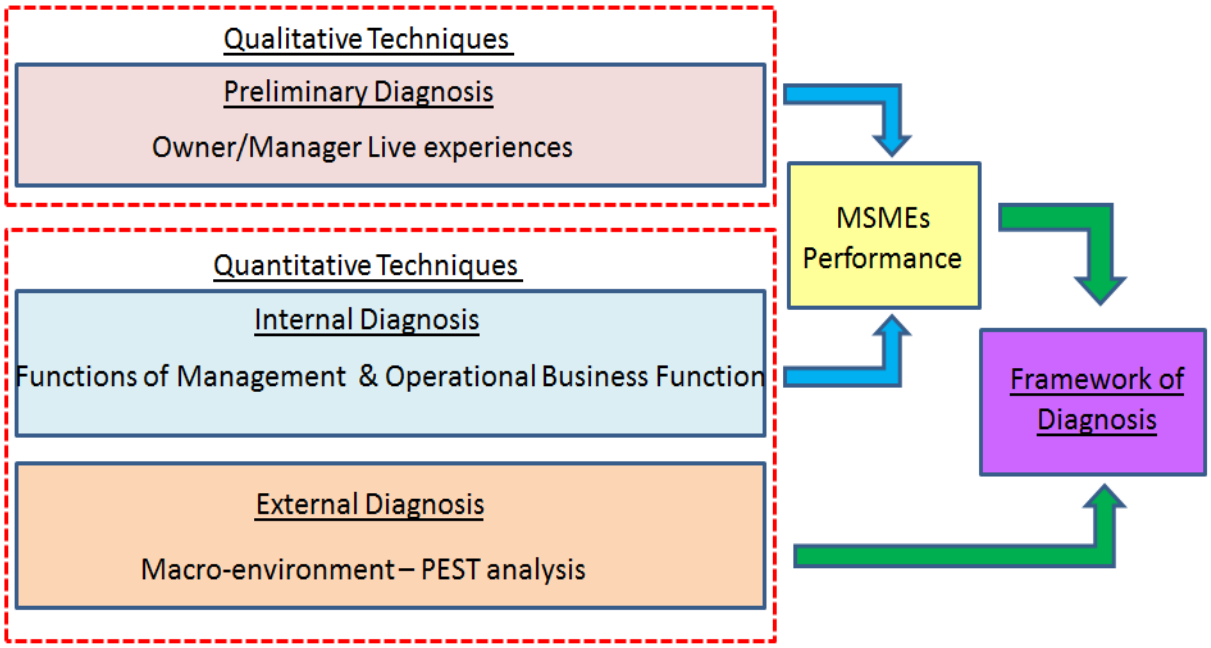


Figure 6: Conceptual Paradigm

4.2. Result of Diagnostic Framework

4.2.1. Profile of the Participants

Out of the 35 selected manufacturing MSMEs, 13 or 42% are community-based enterprises/cooperatives and 18 or 58% are single proprietorship. 74 out of 105 or 70.47% of the target respondent participated in the study, as shown in Table 1.

Table 1. Number of Respondents Participated

Respondents	GIA	SETUP	Total	Percentage
Officers/Board of Directors	12	0	12	16.22%
Owner	0	18	18	24.32%
Manager	10	10	20	27.03%
Employee	11	13	24	32.43%
Total	**33**	**41**	**74**	**100.00%**

4.2.2. Preliminary Diagnosis

4.2.2.1. Establishing MSMEs and their experiences in managing business operations

A business start-up is mostly based on the drive and motivation of doing business by the founder. As a result, MSMEs have different founding experiences. Organizations like cooperatives and associations started the business because government agencies such as the Department of Agrarian Reform (DAR), Department of Trade Industry (DTI), Department fo Labor and Employment (DOLE), and DOST initiated it. While single proprietorship comes up with four themes in terms of starting or founding, source of livelihood, continuity of family business, interest, aspiration, or hobby, additional line of business in the existing livelihood, and retirement plan emerged to be the most dominating ideas based on their responses. Noticeably, the reasons are geared towards personal choices and preferences. It's no surprise because Davidson (2020) affirms that sole proprietorship is the simplest way of starting a business, requiring less paperwork and legal filings when both starting your business, and on an ongoing basis, although it also posts personal asset risks and liability of owned business activities. Managing business operations means accomplishing their daily operations and achieving their goals and objectives as planned.

On business functions such as marketing, production, financial, and human resource management the following were their lived experiences. As to marketing, good quality of products plays an important role. Only three of the co-participants (SP1, SP4, and SP5) have entirely distributed their products in the whole province, mostly at the Pasalubong Center and some places outside the province. There are also online clients but the biggest volume of produce is allocated for local tourists. Direct marketing is the strategy of co-participants SP2 and SP7. However, two organizations do it their own way of advertising their products

using their tag lines as co-participants CA8 and CA2. Co-participant CA2 specifically says, "*we don't have flyers but use tags which contain our information, and we want to put a Sakbit-bitbit logo*". CA8 tag line says, *"Bawat Produktong Binili mo, Pag-ibig sa Kapwa ang Ipinadama Mo"* (see Figure 7 for details for the advocacy that they want to disseminate).



Figure 7. Sample Product Tag Lines

This co-participant is doing well in their campaign in promoting their products which captures attention. According to CA3, "*We make candles with prayer notes and also colored candles, those colored candles have meaning, and we fabricated a rolling store to display our products*" (see Figure 8).



Figure 8. Rolling Store Strategy

Some co-participants are using personalized marketing like SP7 who says, *"I hand out calling cards. So, I just usually receive orders via text messages. I don't place any ads, but I enjoy selling at tiangge"*. Tiangge is a scheduled market day in an area wherein different locations in the province have different schedules. This is the time where people in the far-flung or inner barangays go to the town once a week to buy their needs.

Production plays an important role in MSMEs success and daily operation to provide products for their customer and market. Most of the participant associations and cooperatives depend on seminars and training provided by government agencies during the initial stage of their production. Product development and improving quality needed time and effort to standardize. They focused on product development through trial and error until such time they found the best quality that complemented in the market. Meanwhile, product competitiveness must be established first before marketing. Product improvements and innovations are among the strategies that need further attention to compete in the local and even international market.

There are enough facilities and equipment, however there is equipment that does not match with their needs. As shown in Figures 9 and 10, machines are not fully utilized and stocked in their area. The following pictures were taken in the stock room of co-participant CA7 and CA1 respectively.



Figure 9. Unutilized Machineries



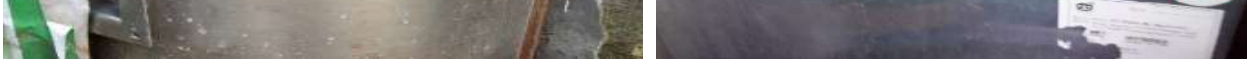


Figure 10. Unutilized Equipment

According to Buan (2019), the Commission on Audit (COA) called out DOST) for inefficient implementation of SETUP. It has accumulated P461.150 million uncollected refunds that have been due for up to 10 years according to 2018 audit report. On top of that, auditors found that P48.62 million worth of equipment for SETUP *"remained unutilized and not properly secured/stored for several years, thus, exposing the equipment to wear and tear and risk of loss of value or purpose of usage"*. Nearly all of that equipment worth P26.7 million remained in the custody of the delinquent beneficiaries. When auditors conducted a site inspection, they could not find P76.23 million worth of equipment. Auditors also found that P5.710 million worth of SETUP funds were spent for other purchases outside of the program.

The intention is good but the manner of providing support and assistance needs to be corrected. It was due to the fund utilization and disbursing policy of the government and some rules and regulations regarding purchasing equipment and machinery including the manner of implementing the projects. As to the factors of failure, COA found out that inadequate monitoring and thorough evaluation of the factors that will ultimately impact on the success or failure of the project, such as ready building facility that will house the SETUP equipment, financial capacity of the proponent, appropriate equipment technology, and potential market of the product resulted in defaulted refund payments of several proponents/beneficiaries, premature termination of the projects, and pullout of equipment (Buan, 2019). Herpacio and Hidalgo (2018) found out that the major problems encountered by the proponent during program implementation of DOST-SETUP such as defective equipment, failure to meet the repayment schedule, and non-compliance with documentary requirements.

On financial aspect, common practices of the organizations and cooperatives in recording and bookkeeping is the use of a logbook. This is the common set-up as they do their recording and maintaining records. The use of the logbook system without a standard format has an impact on making economic decisions by business owners. The statements reveal that the lack of manpower to do the recordkeeping function of the business may result in the production of inaccurate and delayed financial reports, depriving the business owners of the information vital for making wise economic decisions. Most of them cannot afford to hire a bookkeeper, which is why they are maximizing the responsibilities of the treasurer. With this kind of set-up, check and balance should be monitored and properly audited. In addition, the

statements imply the lack of internal control system or the check and balance, which would raise questions as to the integrity of the financial reports resulting from the use of the "logbook system."

Monitoring and tracing records is commonly used in doing their daily transactions. Majority of them use delivery and temporary receipts, petty cash, vouchers, purchased order, order slip and the like. The use of business forms provides supporting documents to business transactions. This practice eases the recordkeeping function and helps provide an accurate financial reports and paper trail which are important during audit. They just compare sales and expenses to know how much they earn for this period. This is revealed by co-participants SP3, SP5, SP6, and CA4, respectively. On the other hand, co-participant SP2 greatly helped in doing record keeping evaluating performance when they became part of the DOST project. She exclaims, "*I do a monthly report subsequent to the report I prepare for DOST. When we're not yet assisted by DOST, we don't do any reporting*". But CA1 wants to learn more about recording and budgeting. "*We conduct meetings headed by our Chairman. We are still hoping to improve our knowledge on proper recording particularly about budgeting*".

Some of the human resource management practices by SETUP and GIA are the following: As to labor, assigning leader for the monitoring and supervision, per day workers, no work no pay, hiring when needed, by contract or "pakyaw" basis, and wages proportion to their output per day. As to hiring, they use informal hiring, referral, and prioritizing relatives and friends or members of the organizations. In terms of providing incentives, they have free snacks or meals, Christmas gift, incentives for extra output over the target, earnings, and other benefits provided by law. However, some GIA that have minimal income cannot provide other benefits provided by laws. As to performance, most of them evaluate their employees based on trustworthiness of the employees.

4.3. Internal Diagnosis

4.3.1. Functions of Management

Management is among the most important factors of achieving business goals and making MSMEs wealthy. Terry (n.d) affirms that management is a distinct process consisting of planning, organizing, activating, and controlling to determine and accomplish the objectives by the use of people and resources. Getting things done through others is the real principle of management. Henri Fayol (1916) first identified elements or functions of management through a framework called P-O-L-C, which stands for planning, organizing, leading, and controlling.

Table 2. Function of Management Implementation

Functions of Management	DOST Assistance	Std. Deviation	Mean	Verbal Description
Planning	GIA	0.790	3.56	Very Good
	SETUP	0.769	3.89	Very Good
Organizing	GIA	0.818	3.61	Very Good
	SETUP	0.700	4.03	Very Good
Leading	GIA	0.745	3.58	Very Good
	SETUP	0.839	4.18	Very Good
Controlling	GIA	0.740	3.44	Good
	SETUP	1.020	3.97	Very Good
Overall		**0.797**	**3.78**	**Very Good**

Table 2 discloses the function of management implementation. As shown, the overall mean is 3.78 which is interpreted as **"**Very Good**".** Generally, all variables got verbal interpretation of "Very Good", except for "Controlling" under GIA that got an interpretation of "Good". This only posits that both respondents under DOST assistance have high regard and appreciation with the performance of the people concerned in terms of POLC. But obviously, "Leading" got the highest mean of 4.18 which is interpreted as "Very Good". This is of no surprise because according to Rietsema (2015), without leadership, all other business elements lie dormant. When leaders lead with wisdom, an organization's productivity is maximized, and its business goals are achieved perfectly. Further, effective leading provides guidance, motivates people, initiates action, builds morale and improves satisfaction, coordinates employee needs and organizational needs, and delegates responsibilities.

On the other hand, the function that got the lowest mean is "Controlling" with 3.44, interpreted as **"**Good**".** Although the assessment rating is still positive, experts warn the possibility that the controlling function is misunderstood as the last function of management. It is a function that should bring back the management cycle back to the planning function. It should be considered as a tool that helps in finding out

how actual performance deviates from standards and also finds the cause of deviations & attempts which are necessary to take corrective actions based upon the same.

According to Lumenlearning.com (2019), controlling involves ensuring that performance does not deviate from standards. Controlling consists of three steps, which include (1) establishing performance standards, (2) comparing actual performance against standards, and (3) taking corrective action when necessary". This function of management is the less implemented and overlooked aspect of management. Monitoring and evaluation is very important in controlling because it can't be done without basis or evidence of data at hand. Even though SETUP personally manages it, they may have forgotten that little things but can be seen when they are controlled.

4.3.2. Management practices on operational business function

Operational business function is the functional areas of business operations as to marketing, production, financial, and human resource management aspects. According to businessdictionary.com, *"Functional Areas"* is defined as the grouping of activities or processes based on their need in accomplishing one or more tasks. It's also an alternative term for business unit. These are the most common areas of operation that MSMEs are involved in.

Table 3. Management practices on operational business function

Operational Functions	**DOST Assistance**	**Std. Deviation**	**Mean**	**Verbal Description**
Production	GIA	0.692	3.60	Mostly Practiced
	SETUP	0.590	4.29	Mostly Practiced
Marketing	GIA	0.714	3.53	Mostly Practiced
	SETUP	0.538	4.36	Mostly Practiced
Financial	GIA	0.664	3.20	Practiced
	SETUP	0.704	3.79	Mostly Practiced
Human Resources	GIA	0.917	3.06	Practiced
	SETUP	1.000	3.74	Mostly Practiced
Overall		**0.731**	**3.70**	Mostly Practiced

Table 3 discloses the management practices on operational business function. As shown, respondents believe that the MSMEs are doing well in relation to operational business function. The overall mean is 3.70 which is interpreted as "Mostly Practiced." This implies that the respondents highly regard the efforts being exerted by the organizations involved. Of all the variables, *Marketing* emerged to have garnered the highest of mean of 4.36, which is interpreted as "Mostly Practiced." This finding is a dead give-away simply because all businesses presented are all profit organizations, thus marketing is expected to be on top of the list. What is alarming in the data is *Human Resource* which got the lowest mean of 3.06, interpreted as "Practiced" under the GIA. This finding somehow contradicts the fact that businesses that value their employees tend to perform better than those that don't. It is a fact also that happy and satisfied employees are more productive, which, in turn, helps improve their overall quality of work.

MSMEs Performance	DOST Assistance	Std. Deviation	Mean	Verbal Description
Sales	GIA	0.777	3.12	Satisfactory
	SETUP	0.784	4.18	Very Satisfactory
Production	GIA	0.802	3.41	Satisfactory
	SETUP	0.791	3.99	Very Satisfactory
Income	GIA	0.858	3.12	Satisfactory
	SETUP	0.824	4.02	Very Satisfactory

GIA projects have two critical areas of operational business function, the financial and human resource management both get a verbal description of practice with 3.20 and 3.06 mean respectively. Even SETUP projects got higher mean in financial and human resource management with a verbal description of **"mostly practiced"** but low compared to production and marketing. It was a sign that these two areas may have significant effects on their performance. Forth and Bryson (2018) affirm that SMEs are less likely to use formal management practices than larger firms, but that such practices have demonstrable benefits, on average, for those SMEs that use them. More extensive use of formal management practices helps SMEs to grow and increase their productivity. The returns are most apparent for those investing in human resource management practices, such as training and performance-related pay, and those setting formal performance targets.

According to Katyal and Xaviour (2015), as MSMEs focus more on running the business on a day-to-day basis, they find less time to manage the Human Resource processes which is perceived as non-priority. MSMEs do not feel like revamping existing organizational structure, especially when they know that the status quo is delivering the output. Competitiveness of MSME can be enhanced through better human resource (HR) practices of recruitment, selection, training, and compensation.

4.3.3. MSMEs Performance

At the end of every business cycle or calendar, an evaluation of performance and accomplishment of targets measures how wealthy and healthy the business enterprise operation is. Performance can be evaluated using financial analysis as a tool. However, the research study used only the non-financial data and interviews with co-participants. MSMEs performance focused on the following: sales, production, and income.

Table 4. MSMEs Performance

Table 4 shows the overall performance of MSMEs. As shown, the overall mean for this table is 3.64, which is interpreted as "very satisfactory". Noticeably, GIA projects were assessed as "satisfactory" in all areas while SETUP projects were assessed "very satisfactory" with means of 3.22 and 4.06 respectively. Critical for GIA is "sales and income" which only got a mean of 3.12. It is a manifestation that most of GIA assisted enterprises require more sales to generate higher income. Based on the interview and observation, they have problems in marketing and even in production. Not all were performing well; some of them were struggling for better sales and a sustainable market.

Marginal production due to low working capital and sluggish market distribution hamper their profitability. However, SETUP was low in production with 3.99 mean though very satisfactory but if enhanced, they will give better outcome. For instance, there were large volumes of orders outside the

province or even opportunities to export but they lacked raw materials. Most of their raw materials are indigenous to the province like arrowroot, buntal, and abaca, which cannot serve and sustain the large volumes of orders. The majority of single proprietorship and family business enterprise is doing well and can sustain operations and gain substantial profit.

4.4. External Diagnosis

4.4.1. Macro-Environmental Factors Affecting the Operations of the MSMEs

Extent of the macro-environmental factors affecting the operations of MSMEs in the province uses PESTAnalysis.

Table 5 shows the result of PEST Analysis. As shown, the overall mean is 3.47 which is interpreted as "moderate effect" Specifically, GIA rated the variables as "moderate effect" with 3.21 mean, while SETUP gave a mean of 3.74 which is interpreted as "high effect". GIA gave the highest mean of 3.40 which is interpreted as "moderate effect" on "technological" and low on "economic" and "political" with 3.12 and 3.13 mean respectively, both interpreted as "moderate effect". SETUP gave the highest mean of 3.98, which is interpreted as "high effect" to "technological" and low to "political" with 3.32 mean which is interpreted as "moderate effect".

Table 5. Result PEST Analysis

Macro-environmental Factors	DOST Assistance	Std. Deviation	Mean	Verbal Description
Political	GIA	0.663	3.13	Moderate
	SETUP	0.853	3.32	Moderate
Economic	GIA	0.678	3.12	Moderate
	SETUP	0.693	3.82	High
Socio-cultural	GIA	0.645	3.18	Moderate
	SETUP	0.761	3.83	High
Technological	GIA	0.913	3.40	Moderate
	SETUP	0.872	3.98	High
Overall	**0.717**		**3.47**	Moderate

GIA recipients are moderately affected by macro-environmental factors but at some point, they need to consider the socio-cultural aspect which can affect their marketing factor and technological factor, hindering their production. MSMEs under the SETUP project are more vulnerable, indicating a high degree of effects on their operation such as technological, socio-cultural, and economic aspects respectively.

4.5. Relationship among the Internal Factors (Management Functions and Operational Functions), External Factors/Macro-Environment (Political, Economic, Socio-Cultural, and Technological), and MSMEs Performance

Table 6. Pearson Correlation Table on MSMEs Performance

Relationship Between Variables	Pearson Correlation	P-value	Description
Function of Management on performance	.647**	.000	Significant
Business Operational Function on performance	.857**	.000	Significant
Macro-environment on performance	.552**	.000	Significant

*Correlation is significant at the 0.05 level (2-tailed) **Correlation is significant at the 0.01 level (2-tailed)

Table 6 reveals that using Pearson Correlation, the three variables have a significant relationship among each other. Since p-value is less than the 0.05 level of significance, there is positive correlation among functions of management, operational business, and macro-environment on performance of the MSMEs.

Grouped according to type of DOST assistance as to internal factors (management functions and operational business), external factors (Political, Economic, Socio-cultural, and Technological), and MSMEs performance, the p-value is less than the 0.05 level of significant as shown in Table 7. Therefore, all the variables are significantly related, hence the null hypothesis is rejected which means that there is a significant relationship among internal factors (management functions and operational business), external factors (Political, Economic, Socio-cultural, and Technological), and MSMEs performance.

Relationship Between Variables	Pearson Correlation	p-value	Description
For SETUP			
Internal factors on performance	.825**	.000	Significant
External factors on performance	.490**	.001	Significant
Internal factors on external factors	.723**	.000	Significant
For GIA			
Internal factors on performance	.685**	.000	Significant
External factors on performance	.413*	.017	Significant
Internal factors on external factors	.590**	.000	Significant

Table 7. Pearson Correlation Table on Internal, External, and Performance
*Correlation is significant at the 0.05 level (2-tailed) **Correlation is significant at the 0.01 level (2-tailed)

According to Neneh and Van Zyl (2012), all six selected business practices that examined (marketing practices, strategic planning practices, human resource management practices, risk management practices, performance management practices and teamwork practices) have a positive and significant relationship with SME performance. Moreover, 97.1% of the SMEs that implemented all six business practices had optimal business performance.

Broszeit et al. (2016) explicitly investigate the impact of formal management practices on SME performance, finding that such practices have a positive effect, but one which is weaker than that found among larger firms. Those studies which do exist have used subjective ratings of performance provided by the same respondents who reported on the firm's use of management practices. Wu et al. (2015), Lai et al. (2015) and Sheehan (2014) all find positive associations between the use of formal management practices and performance among SMEs (Forth and Bryson, 2018).

4.6. Process of Developing Framework of Business Diagnosis

As an output of the study a series of activities were undergone to arrive on a framework of diagnosis or protocol. The following are the step-by-step process:

4.6.1. Theories

When finding the relative significance of the internal and external factors in relation to MSMEs performances, there is a definite significance since there is an actual linkage this can be either a direct or indirect relationship; and these are found in the compiled theories and models.

In entrepreneurial theory, the common belief is that the owners/managers have a common goal and that is to be successful in their business; this mindset is a strong influence that can propel MSMEs owners/managers despite their minor background in management or humble educational attainment. The self-confidence and perseverance of these entrepreneurs can inspire their personnel and open opportunities. However, the attribution theory reveals the subjective attitude of many MSMEs owners/managers by perceptually minimizing their blame towards themselves when the business is poorly managed and passing the fault to the external environment or the result of forces of the market. These two theories closely relate to the MSMEs owners/managers and lived experiences in operating the business.

Following the discussion on the significant relations of the internal and external environments is notably examined by the open theory system. When one of the internal environments significantly impacts the other variables in the internal environment and subsequently creates an effect on the MSME's business performance and can directly or indirectly affect the external environment. MSME's external environment cannot be controlled due to volatile and contrasting circumstances, it can either directly or indirectly have an influence on the MSMEs internal environment thus may associate a failure or success in the business outcome.

The study acknowledges the Lussier model and the 15 variables that can be used as part of the intervention programs to induce success rates of the MSMEs business performances. Professional advisers can utilize the Lussier model as a checklist tool to indicate which variables are adapted and not by MSMEs owners/managers to possibly indicate problems, reconsiderations of strategies and statistically provide prognosis of the current business outcomes and adapt interventions.

4.6.2. Conceptual Framework

Figure 11 below presents the conceptual framework used in the study. It focuses on the premises that both the internal environments of the MSMEs, and external environments of the industry may have a direct/indirect or no relationship to the MSMEs' performances. The internal environments consist of the lived experiences of the owners and/or managers, management functions and management practices either directly or indirectly impact on the perceptions of MSMEs owners and/or managers that are grouped by type of DOST assistance. Conversely, the external or macro environment factors may have direct/indirect relationship to the MSMEs internal environment.

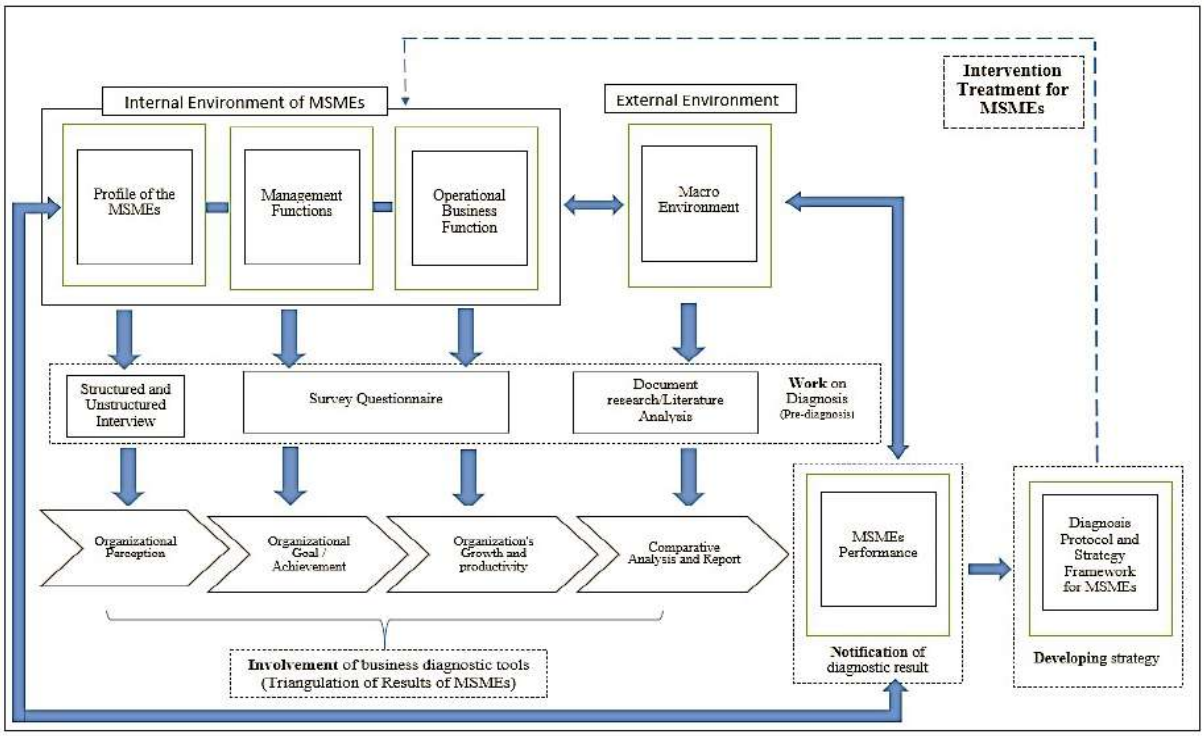


Figure 11: Conceptual Framework Towards Business Diagnosis or Protocol

The framework proposes that the internal and external environment factors should be first identified, measured, and assessed. And these sets of information will provide a holistic performance (Mabhungu, 2017) measurement for the enterprise that will serve as bases for the formulation of an intervention program in the form of Diagnosis Framework for MSMEs. This intervention program may also serve as a performance measurement framework to apply to MSMEs.

4.6.2.1. Internal diagnosis. This procedure was conducted through a survey question that reflected an internal evaluation of the owners/managers management functions and practices and including the MSMEs status on sales, production, and income generation. The following methods were used in the internal diagnosis:

a. The method utilized was the *PRIMO-F model of Morrison* that investigated the internal factors, capabilities of the MSMEs and how these sectors contribute within the enterprise and its' management effectiveness. This focused on effective organization by fulfilling the following equation:Organizational Growth Effectiveness = Performance x Potential, where "Performance to date" (FiMO) included: Finance, Marketing and Operations and "Potential for the future" (RECoIL) included: Resources, Experience, Controls and Systems, Innovation and Leadership. PRIMO-F refers to: People, Resources, Innovation & Ideas, Marketing, Operations, and Finance.
b. The study employed the *Diagnostic approaches and dimensions* to provide support to the multi-dimensional issues encountered by MSMEs and its respective stakeholders as they forge their partnership towards innovation and change (Synergistic Intelligence, 2019).

4.6.2.2. External Diagnosis. Further diagnosis was adapted, in the form of a survey questionnaire, to determine the direct and indirect association of macro-environmental factors to the MSMEs' operation in Marinduque. These results will be the basis for the appropriate treatment and strategy recommendations to enhance the MSMEs' sustainability. The method to be applied was Business Diagnostic Overview (Mimick, et. al, 2015), as it delved on the MSMEs' internal and external factors as it is affected by the limited resources and capabilities as it attempts to competitively goal for product and process innovation in a competitive environment.

Macroenvironments or external environments had certain direct relationship to MSMEs performances for slight and major changes on political, economic, social, and technological factors can stipulate opportunities or may threaten the current situation and stability of the industry that the MSMEs belong to. MSMEs performances in terms of financial status can be aligned to the current industry levels by industry comparisons and trend analysis accessed from literature reviews (Al Saleh, 2016; Mabhungu, 2017).

Macroenvironment factors have directly affected MSMEs internal environment that is why many MSMEs ownersor managers necessitate changes by adapting to proactive strategies and practices and acquiring technologies that enables some MSMEs businesses to achieve their sustainability and goals (Al Saleh, 2016).

4.6.2.3. MSMEs performances. Measuring internal MSMEs performances used by the study is non-financial performances which include the following: (1) MSMEs owners/managers background, commitment and perceptions (Mabhungu, 2017; Al Saleh, 2016); (2) Management Functions; and (3) Management practices.

The *MSMEs owners/managers* can highly influence the success or failure outcome performances of the MSMEs through their personal objectives, personal qualities, education, experiences, family background, networking skills in relation to the daily operations and overall characteristics of the business (Al Saleh, 2016). When owners/managers have commitment to success, it reflects a positive environment and competency towards the management of their business. Failure to plan or poor management reflects no commitment and accountability that can greatly affect the other internal environment within their business (Simpson, Padmore, & Newman, 2012). In short, the owners/managers primarily have the larger role that can influence their business performances (Al Saleh, 2016).

Management functions have a pivotal role in the MSMEs' internal environment for it relates to the owners/managers' technical knowledge, procedures, competency in motivating workers, delegating business-related tasks, managing, and training of employees (Ahmad, Halim, & and Zainal, 2010). Owners/ managers' ability to plan depends on their supervision and control of the management is linked to their distinct personal and demographic; as well as the variable resources of their business' daily operations. This relationship between the owners/managers characteristics and management functions relays how they control and manage successfully or poorly the business resources (Al Saleh, 2016).

Management practices focused upon an innovation that improves the effectiveness of work systems to gain growth and productivity of MSMEs. Management practices impact the business performances, reflected in the brand performances, customer satisfaction, employee turnover, employee performances, operating efficiency, etc. (Mabhungu, 2017). These performances are connected to the survival of an enterprise and its sustainable relationship with their customers brought by the revenue in the form of sales (Mabhungu, 2017).

4.7. Policy Interventions

It's high time for our policy makers to review and evaluate programs and projects intervention assisting MSMEs most specially grant projects to community-based enterprises. Thus, a policy on adopting Wind Involve Notify Develop (WIND) Framework as an aid in assessing and evaluating MSMEs for the concerned government agencies or policymakers to create more effective and relevant programs and project interventions especially for community-based enterprise' grant projects was proposed.

As a legal basis the Republic Act No. 9501, an act to promote entrepreneurship by strengthening development and assistance programs to Micro, Small and Medium Scale Enterprises, amending for the purpose Republic Act No. 6977, as amended, otherwise known as the "Magna Carta for Small Enterprises" and for other purposes. RA. No. 9501- *Sec. 10. Rationalization of Existing MSME Programs and Agencies*. The MSMED Council shall conduct a continuing review of government programs for MSMEs and submit to Congress and the President a report thereon together with its policy recommendations. Through appropriate government agencies, conduct other programs or projects for entrepreneurial development in their respective areas; and provide courses and development programs, training, advice, consultation

on business conceptualization and feasibility, financing, management, capacity building, human resources, marketing, and such other services to support the needs of MSMEs.

4.8. Implementation of the Policy

For proper conduct in the implementation of the proposed policy on adopting the WIND Framework or protocol as an aid in the assessment and evaluation of MSMEs for the creation of policy interventions, the following processes are hereby presented below shown in Figure 12.

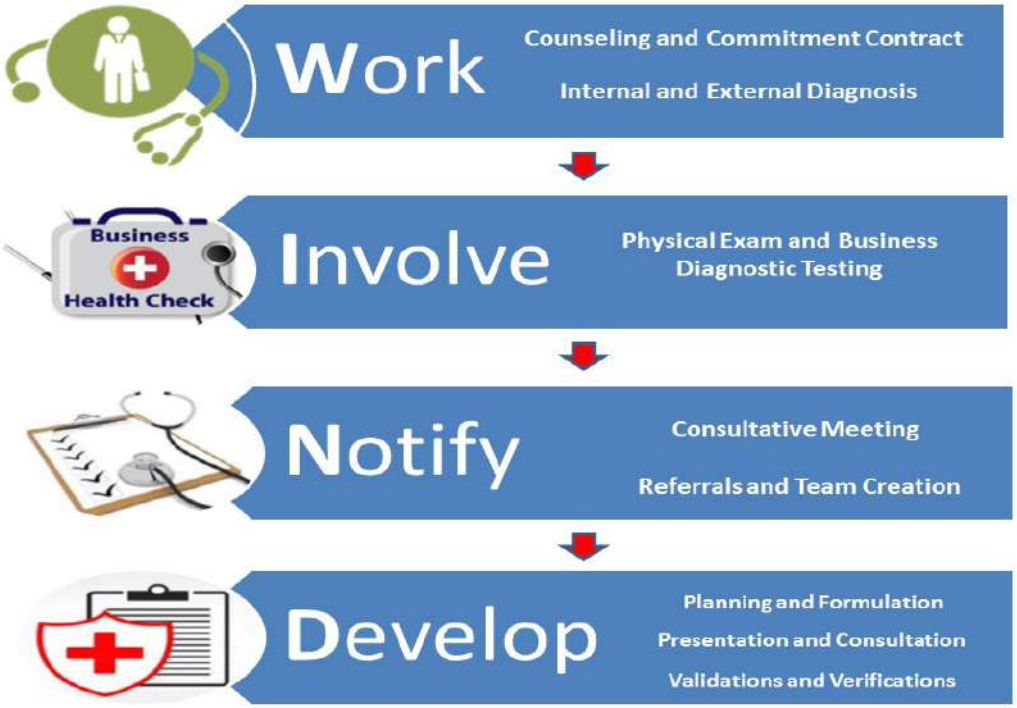


Figure 12. **W**ork **I**nvolve **N**otify **D**evelop (WIND) Framework

4.8.1. Work on diagnosis

The MSMEs that experience business problems will undergo the process. The owner/manager or persons involved in the business are likely to be the first person to consider symptoms and may choose at this point to engage in the business diagnosis. Work on diagnosis has two steps: Counseling and Commitment Contract and Internal and External Diagnosis. The former will determine the merit and sincerity of the MSMEs to undergo into the process, while the latter will determine the degree of need and significance. Like in medical procedures, there will be consent of the patient and the relatives before undergoing medical treatment or procedures. For the MSMEs, signing of contract or agreement should be done to ensure the agreement is formal and binding. These will enumerate the obligation and responsibilities of both parties.

Once a MSMEs seeks internal and external business diagnosis, there is an iterative process of information gathering, information integration and interpretation, and determining a working diagnosis. Taking history of business operations, performing a physical examination, observation, and field visitation activity will be done. Almonte (2016) discusses the activities involved in diagnosis such as: a. In-depth fact finding, b. Fact analysis and synthesis, and c. Detailed problem examination. The business counseling process consists of four phases: 1. Making the first contact, 2. Studying the client, 3. Diagnosing, and 4. Working on the plan. A good diagnosis will lead to effective solutions. At the beginning of the diagnosis, hypothetical cause(s) may be assumed. As data and information are gathered, these hypotheses will either be negated or confirmed. During diagnosis, the client's problem solving and decision-making abilities must be assessed (Department of Trade and Industry and University of the Philippines Institute for Small-Scale Industries, 2015).

4.8.2. Involvement of business diagnostic tools

Once a diagnosis foresees merits, a further investigation and examinations will be prepared. Business diagnostic tools must be used in the business functional areas such as marketing, production, financial and human resource in analyzing and validating the problem of the MSMEs. DTI Small Business Counselors Manual of 2015 identified tools to aid counseling jobs. However, unlike a doctor, mechanic, or carpenter, the tools are intangible and analytical tools are useful in the job as a counselor. There are many analytical tools that can be used in counseling jobs. The tools and strategies presented in the manual are grouped using four functional aspects of management such as: 1. Marketing, 2. Production, 3. General Management, and 4. Finance.

There are 15 tools categorized as "classic" as they find applicability in many of the functional areas of management. The following tools are: 1. Cause and effect diagram, 2. Charts and graphs, 3. Cost benefit analysis, 4. Decision tree, 5. Flowchart, 6. Forced field analysis, 7. Gantt chart, 8. Linear responsibility chart, 9. Pareto analysis, 10. PERT/CPM, 11. Procedure chart, 12. Relations Diagram, 13. Scatter diagram, 14. Stakeholder analysis and 15. SWOT analysis. Many of these tools will help organize thoughts, analyze, and evaluate a wide range of problem situations.

4.8.3. Notification of diagnostic result

Morrison (2012) states that diagnostic reviews are generally at a strategic level and not audits and do not track individual items of expenditure or process actions, nor do they provide a pass or fail assessment of an organization's management system. Rather, they provide leaders and stakeholders with information to act upon. The Diagnostic Review process should involve four groups of people: Board or Owners, Managers, Staff, and other strategic stakeholders. In addition, it should include information from two external groups: the Customers and Suppliers.

4.8.4. Developing strategy

In terms of notification or communication among the business counselors, the MSMEs representatives and the employees are critical in this cycle of information gathering, integration, and interpretation. The working diagnosis may be either a list of potential diagnoses (a differential diagnosis) or a single potential

diagnosis. Typically, business counselors will consider more than one diagnostic hypothesis or possibility as an explanation of the MSMEs problem symptoms and will refine this list as further information is obtained in the diagnostic process. The working diagnosis should be shared with the MSMEs representatives such as owner and manager, including an explanation of the degree of uncertainty associated with a working diagnosis. Each time there is a revision to the working diagnosis, this information should be communicated.

The result of diagnosis is a critical factor in developing strategy. Intervention strategy to correct and solve the problem at hand should be based on the result of correct diagnosis. Developing strategy should be an outcome of the committee or group involving the following: business counselor, business expert, technical expert, and owner/manager. The identified interventions strategy will undergo several stages: 1. Planning and Formulation, 2. Presentation and Consultation, 3. Validations and Verification.

The planning and formulation stage is conceptualization and creation of strategy and work plan; 2. the presentation and consultation stage is characterized by presenting and consulting the team in order to analyze and scrutinize the efficacy of the strategy or treatment to be conducted; and 3. validations and verifications stage determines how effective the formulated strategy or treatment can be implemented. The WIND Table below shows the summary of the framework and its processes.

Table 8. Work Involve Notify Develop (WIND) Table

Work on diagnosis	Involvement of business diagnostic tools	Notification of diagnostic result	Developing strategy	
Work on diagnosis has two steps: Counseling and Commitment Contract and Internal and External Diagnosis	Once a diagnosis foresees the merits, a further investigation and examinations will be prepared. Business diagnostic tools must be used in the business functional areas such as marketing, production, financial and human resource in analyzing and validating the problem of the MSMEs.	In terms of notification or communication, the MSMEs representatives and the employees are critical in this cycle of information gathering, integration, and interpretation.	The result of diagnosis is a critical factor in developing strategy, and treatment. Intervention strategy to correct and solve the problem at hand should be based on the result of correct diagnosis.	
a. Counseling and Commitment Contract – this will determine the merit and sincerity of the MSMEs to undergo into	The tools and strategies are grouped using four functional aspects of management such as:	The working diagnosis may be either a list of potential diagnoses (a	Developing strategy should be an outcome of the committee or group involving	

the process, while the latter will determine the degree of need and significance. Like in medical procedures, there will be consent of the patient and the relatives before undergoing medical treatment or procedures. For the MSMEs, signing of contract or agreement should be done in order to be formal and binding. These will enumerate the obligation and responsibilities of both parties.	1. Marketing, 2. Production, 3.General Management, and 4. Finance.	differential diagnosis) or a single potential diagnosis. Typically, it will consider more than one diagnostic hypothesis or possibility as an explanation of the MSMEs problem symptoms and will refine this list as further information is obtained in the diagnostic process.	the following: business counselor, business expert, technical expert, and owner/manager.	**Treatment and Intervention**
b. Internal and External Diagnosis - once a MSMEs seeks business diagnosis, there is an iterative process of information gathering, information integration and interpretation, and determining a working diagnosis. Taking history of business operation, perform a physical examination, observation, and field visitation activity will be done.	There are 15 tools categorized as "classic" as they find applicability in many of the functional areas of management. The following tools are: 1. Cause and effect diagram; 2. Charts and graphs; 3. Cost benefit analysis; 4. Decision tree; 5. Flowchart; 6. Forced field analysis; 7. Gantt chart; 8. Linear responsibility chart; 9. Pareto analysis; 10. PERT/CPM; 11. Procedure chart; 12. Relations Diagram; 13. Scatter diagram; 14.	The working diagnosis should be shared with the MSMEs representatives such as owner and manager, including an explanation of the degree of uncertainty associated with a working diagnosis.	The identified interventions strategy will undergo several stages: 1. Planning and Formulation is conceptualization and creation of strategy and work plan; 2. Presentation and Consultation is characterized by presenting and consulting the team to analyze and scrutinize the efficacy of the strategy or	

	Stakeholder analysis; and 15. SWOT analysis.		treatment to be conducted; and 3. Validations and Verification - determines how effective the formulated strategy or treatment can be implemented.	

5. CONCLUSION

Based on the findings of the study, it was concluded that despite the identified strengths of selected manufacturing MSMEs assisted throughSETUP and GIA from the province of Marinduque still encounter business constraints which DOST may check and consider to resolve. Such identified strengths and constraints are: 1. Out of the 35 MSMEs composed of 13 GIA and 18 SETUP beneficiaries; almost 40% belong to small enterprises and are among the top performers; 2. as to the function of management, controlling is a less implemented and overlooked aspect by most of the GIA projects while as to operational function, human resource is among the non-prioritized areas; 3. there are enough facilities and equipment; however, equipment that does not match with their needs resulting in underutilization and stocked in their area; 4. the present environment favors the development and expansion of MSMEs considering the growing tourism potentials of the province; 5. the SETUP project is more vulnerable to external factors such as technological, socio-cultural, and economic; 6. SETUP and GIA projects have significant differences as to their experiences and significant relationships to internal factors, external factors, and performance. Among the constraints experienced were limited working capital, lack of market, technical and production problems (slow production and tedious process, number of rejects during the early stage of the project, inappropriate equipment, and tools), high turn-over of workers, difficulties on managing people, and lack of committed employees and members of the organizations; and 7. managing daily operations of the enterprise is critically influenced by the type of business organizations. Furthermore, the study concluded that utilizing diagnostic framework may serve as a critical factor in providing aid for the government specifically policymakers to assess and evaluate MSMEs and be able to craft policy interventions, given that available literature today discloses rare studies about business diagnosis or studies that examine the health condition of the firms, and most of them were conducted to assess and evaluate business performance and organizational diagnosis.

6. RECOMMENDATIONS

In the light of the findings and conclusions of the study, the following recommendations are hereby given to DOST, other government agencies, and non-profit organizations concerned: a. assistance from the government agencies for grant or transfer of funds to community-based enterprises of cooperatives and other organizations should give emphasis on the obligations and responsibilities of the beneficiary and incorporate suctions for not performing; b. initiated projects or community-based enterprises must go through the process of product testing and development before commercialization to eliminate the cost and high risk of failure. Also, considering the knowledge skills and technical competence of the people; c. providing technology thru facilities and equipment for community-based enterprises of cooperatives and other organizations should be based on the needs and capability of the current condition of the enterprise including the owner or managers' attitude and character of member to address identified problem on underutilized and stocked equipment, likewise ensuring the optimal utilization of available and limited resources; d. Consider conducting interventions such as trainings and workshops that focus on enhancing operational and management functions, capacity building, human resources, financing, marketing, and other services which may contribute in equipping MSMEs with adequate knowledge and skills necessary for improving their performance, quality of output, and their overall growth and development; ***e.*** If feasible and upon validation, the study recommends the adoption of the WWIND Framework in the assessment and evaluation of MSMEs in order to create more effective and relevant policy interventions especially for community-based enterprise grant projects that would help address key business constraints and enable MSMEs to further grow and develop.

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- **Definition of Terms**

Business diagnosis is an inquiry and exploration of business disorders by analyzing the internal situation and external environment disturbing business operations.

Community-Based Enterprise – is an organized individual in the community who is involved in conducting business operations within the area, partnering their members as their co-owner and manager.

External factors are the outside environmental factors that affect business operation.

Grants-In-Aid (GIA) is a program that provides technological innovations to improve their products, services, operations, increase their productivity and competitiveness and develop new products for cooperatives, farmers organizations, and or associations in a form of grant.

Internal factors are within the business operation under control of the management.

Management Functions are the principles of management categorized into four major functions such as planning, organizing, leading, and controlling known as the P-O-L-C framework.

Management practices refer to the present strategy and activities performed by the management to continue business operations.

MSMEs is any business activity/enterprise engaged in industry, agri-business/services, whether single proprietorship, cooperative, partnership or corporation whose total assets, inclusive of those arising from loans but exclusive of the land on which the particular business entity's office, plant and equipment are situated," and must have less than P100 million in assets and at least 200 employees.

Operational Business Functions refer to the functional areas of business operations such as marketing, production, financial, and human resource management.

Small Enterprise Technology Upgrading (SETUP) provides technological innovations to improve their products, services, operations, increase their productivity and competitiveness and develop new products for individuals in a form of loan without collateral and interest intended for single proprietorship only.

- **Acronyms**

COA - Commission on Audit
DOST - Department of Science and Technology
GIA - Grants-In-Aid
ITC - International Trade Centre
MSME - micro, small and medium-sized enterprise
PEST Analysis - Political, Economic, Socio-cultural, Technological
PRIMO-F - People, Resources, Innovation & Ideas, Marketing, Operations, and Finance
SETUP - Small Enterprise Technology Upgrading Program
WIND Framework - Work Involve Notify Develop

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The Implementation of The Barangay Micro Business Enterprise (BMBE) Law

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ABSTRACT

The implementation of the Barangay Micro Business Enterprise Law is an essential key in fostering growth and development in the towns of Carrascal, Cantilan, Madrid, Carmen, andLanuza (CarCanMadCarLan) in the province of Surigao del Sur. By having a firm grasp on the level of implementation of the BMBE Law, a thorough appreciation of the present condition of the business environment among the abovementioned towns can be established and possible interventions to challenges encountered may be formulated. To assess the level of implementation of the BMBE Law the study utilized a survey questionnaire based on the Theoretical Domains Framework. The study endeavored to profile the respondents in terms of principal business activity, total assets, and number of years in business. The study also determined the condition of the Business Environment in terms of: formalization of MSMEs, access to finance and, preferential treatment and legal/regulatory exclusions given by the government, if any. The assessment of the level of implementation of the BMBE Law was established in terms of: knowledge, organizational commitment, capability, optimism, attitudes, reinforcement, and environmental context and resources. The following conclusions were made by the study: 1) most BMBEs in CarCanMadCarLan are engaged in retailing/trading but most do not last for very long; 2) The condition of the business environment in the CarCanMadCarlan area is not favorable to BMBEs. It is currently characterized by a deficiency in terms of availability of access to additional capitalization; 3) The implementation of the BMBE Law in CarCanMadCarLan is suffering from the inadequacy of support from local government units as substantiated by the absence or the lack of enacted related ordinances or adoption of prescribed national laws pertaining to MSMEs welfare; 4) and that there is essential relationship between the condition of business environment and the implementation of the BMBE Law. The study was able to prove that poor implementation of the BMBE Law resonates to the condition of the business environment making it detrimental specially for micro-entrepreneurs which comprise the backbone of the economy. This study should prove beneficial for local government units to be cognizant of their role in creating a favorable business environment for micro-entrepreneurs. The banking and financial sector that they cater more to the needs of micro-entrepreneurs through special credit windows for BMBEs. And for national government offices, allied and concerned offices to come together, support each other, and create credible solutions for the benefit of BMBEs.

Keywords: barangay micro business enterprise (BMBE) law; business environment; msme policy development; msme financing

1. THE PROBLEM AND ITS SETTING

1.1. Introduction

Research conducted on the implementation of the Barangay Micro Business Enterprise (BMBE) Law is crucial because it highlights the value that micro-entrepreneurs play in nation-building. By having a firm grasp of the level of implementation of the BMBE Law, we can have a thorough appreciation of the present condition of the business environment and endeavor to come up with possible interventions for challenges encountered. The BMBE Law's implementation is an essential key in fostering growth and development in the towns of Carrascal, Cantilan, Madrid, Carmen, and Lanuza.

The Philippine government has ratified laws like the Magna Carta for Micro, Small and Medium Enterprises, the BMBE Law, the Go Negosyo Act, and the most recent one, the Ease of Doing Business Law (2018), to cultivate a business-enabling environment in the country. This study endeavored to address the apparent lack, or under-implementation, of the BMBE Law. This law was envisioned to generate employment, ease poverty, act as a catalyst for economic development by encouraging the formation of barangay micro business enterprises, improve the competitiveness of micro-enterprises, and formalize the informal side of the business sector.

The implementation of the BMBE Law is handicapped by the absence or lack of an ordinance that grants incentives or reduces the cost of local taxes, down to the local government level, according to Negosyo Centers Cantilan and Carrascal. This study endeavored to address the permeating lack of understanding of the BMBE Law and the bureaucratic red tape in the government. It also designs and introduces an activity to bridge the gaps or the condition of lacking or under-implementation of the BMBE Law.

The belief of some local government units that the implementation of the BMBE Law could potentially make their revenue dwindle incapacitates them from creating an enabling business environment for BMBEs, as they avoid granting BMBEs the much-needed incentives or reduction in local tax costs. The tall order of requirements before BMBEs could enjoy the full benefits of the law – like the exemption from income tax is debilitating for micro-entrepreneurs. If legislated to support the BMBE Law's efforts, ordinances could help mainstream BMBEs and foster their growth.

On the other hand, White (2018) stated that to promote formalization of firms, the right conditions must be created in which informal firms find that it offers more benefits than costs, along with the use of better enforcement mechanisms. The study assessed the level of implementation of the BMBE Law. A thorough assessment of the implementation of the BMBE Law has yielded valuable insights, a more accurate understanding of outcomes in retrospect, and provided a better appreciation of the present condition of the business environment.

1.2. Theoretical/Conceptual Framework

The implementation of the BMBE Law impacts the condition of the business environment. Thus, this study is anchored to the Theoretical Domains Framework (TDF) from the study of Atkins et al. (2017). According to the study by Atkins et al., the Theoretical Domains Framework is a method for developing determinant frameworks. Nilsen (2015) sorted the constructs into 14 theoretical domains (originally 12 domains), e.g., knowledge, skill, intentions, goals, social influences, and beliefs about capabilities. Determinant

frameworks specify types (also known as classes or domains) of determinants that influence implementation.

The determinants identified by Nilsen (2015) as knowledge, skill, intentions, goals, social influences, and beliefs about capabilities aid the study by providing a concrete set of measures for the BMBE Law's level of implementation, thereby allowing a more comprehensive understanding of the dynamics of its implementation. TDF provides a theoretical basis for this study.

Nilsen (2015) further emphasized that these frameworks in implementation science exhibit a descriptive purpose, indicating factors believed or found to influence implementation outcomes, and these integrative frameworks highlight implementation as a multidimensional phenomenon, with multiple interacting influences. In the case of the BMBE Law implementation, this multilevel interaction is true across the different sets of people and institutions in different contexts that may be directly or indirectly involved with its implementation, such as the BMBEs, the different national agencies, and the policymakers and implementers at the local government unit (LGU) level.

This study is anchored on the concept of the Republic Act 9178. RA 9178 is an act promoting the creation of Barangay Micro Business Enterprises (BMBEs), as well as providing incentives and benefits. The BMBE Law in itself is both simple and complex. It requires proper understanding and delineation of its concepts for maximum implementation to take full advantage of the benefits it offers. It aims to help micro-enterprises in their financial difficulty during the early years of their business operations, allowing them to grow and gradually prosper.

Figure 1 shows the schematic diagram of the study. Below are brief discussions about concepts that show and demonstrate what the relevant indicators are, and the different variables being utilized in the study.

Box 1 comprises the Business Profile of the BMBEs and the BMBE Law as a legal basis. Assessing the business profile of the BMBEs within a given set of indicators gives us a more detailed impression of the respondent micro-entrepreneurs.

Box 2 contains the process of describing the present condition of the business environment. It also contains the process of assessing the level of implementation of the BMBE Law. Each respective process has its own set of indicators or determinants.

Box 3 contains the problems encountered by the respondents during the implementation of the BMBE Law. These were included to guide the researcher on what proposed intervention is to be conducted.

Box 4 presents the output of the study that comes up with the proposed intervention on the problems met in the implementation of the BMBE Law. This will be discussed in the fourth chapter of this study.

1.3. Statement of the Problem

The focus of the study is the assessment of the level of implementation of the BMBE Law in the towns of Carrascal, Cantilan, Madrid, Carmen, and Lanuza. Specifically, the study aimed to answer the following questions:

1. What is the profile of the respondents in terms of the following:
    1.1 Principal business activity;
    1.2 Total assets; and
    1.3 Number of years in business?
2. What is the present condition of the business environment in CarCanMadCarLan in terms of:
    2.1 Formalization of Informal MSMEs;
    2.2 Access to Finance; and
    2.3 Preferential Treatment and legal/regulatory exclusions (fiscal or non-fiscal)?
3. What is the level of implementation of the BMBE Law in terms of:
    3.1 Knowledge;
    3.2 Social / Professional Role and Identity;
    3.3 Beliefs about Capabilities;
    3.4 Optimism;
    3.5 Beliefs about Consequences;
    3.6 Reinforcement; and
    3.7 Environmental context and resources?
4. What are the problems encountered by the respondents on the implementation of the BMBE Law?
5. Is there a significant relationship between the profile of the respondents and the present condition of the business environment?
6. Is there a significant relationship between the profile of the respondents and the level of implementation of the BMBE Law?
7. Is there a significant relationship between BMBE Law implementation and the condition of the business environment?
8. What interventions may be proposed as an output of the study?

1.4. Hypothesis

The study endeavored to provide answers to the following hypotheses:
HO1. There is no significant relationship between the profile of the respondents and the present condition of the business environment.
HO2. There is no significant relationship between the profile of the respondents and the level of implementation of the BMBE Law.
HO3. There is no significant relationship between BMBE Law implementation and the business environment.

1.5. Significance of the Study

The study endeavored to provide significant contributions to the following individuals and groups:

Entrepreneurs. This study benefits most especially the micro-entrepreneurs of the community. The BMBE Law, if effectively implemented, will encourage the formation of Barangay Micro Business Enterprises and micro-entrepreneurs will be able to enjoy its benefits and incentives.

Partner Government Agencies. The following government agencies are partners in bringing about the BMBE Law's implementation, and at the same time serve the best interest of the micro-entrepreneurs: Bureau of Internal Revenue, Department of Labor and Employment, Department of Trade and Industry, and the Local Government Unit. This study serves as the basis for these national government agencies and the LGU for future policies or ordinances related to micro-entrepreneurs and local economic development.

Sangguniang Bayan Members. The study provides policymakers a clear understanding of the BMBE Law, its features, and the benefits and incentives it affords micro-entrepreneurs. By having a good grasp of the law and implementing it, policymakers could help cultivate an enabling business environment in their respective LGUs.

Educational Institutions. The study is useful for the academe in the sense that it emphasizes the value of entrepreneurs and their role in nation-building. Educational Institutions should help the government mold an enterprising mindset among the students by making them understand their contributions as future productive citizens engaging in business-related matters.

Other Researchers. The study would be of use to other researchers as it provides ideas and further information to better understand the importance of evaluating the implementation of the BMBE Law.

1.6. Scope and Limitations of the Study

The study focused only on the implementation of the BMBE Law. The respondents were registered Barangay Micro Business Enterprises (BMBEs) from Carrascal, Cantilan, Madrid, Carmen, and Lanuza whose business organization form was single proprietorship, partnership, corporation, association, and cooperative, respectively.

This study confined itself to interviewing selected proprietors of the micro-business enterprises of the above-stated municipalities. The findings of this study could be subject to other interpretations and will not generalize all areas of micro-business enterprises. This study was conducted during the Calendar Year 2018-2019.

1.7. Definition of Terms

The following terms are defined according to their use in the study.

Access to finance. It pertains to one of the variables used in the study to assess the condition of the business environment. This pertains to access to inclusive financial services, such as credit and equity, payment and insurance services, savings, and guarantee schemes, tailored to the size and needs of micro-entrepreneurs (White, 2018).

PAIC. It is an acronym that stands for Provincial Agri-Industrial Centers. The Department of Trade and Industries designed and designated certain local government units as PAICs. The towns of Carrascal, Cantilan, Madrid, Carmen, and Lanuza are PAICs according to the DTI.

Beliefs about capabilities. This variable refers to the acceptance of the truth, reality, or validity about an ability, talent, or facility that a person can put to constructive use. It is one of the variables used to assess the implementation of the BMBE Law.

Beliefs about consequences. It pertains to one of the variables used to assess the implementation of the BMBE Law. This domain refers to the acceptance of the truth, reality, or validity about outcomes of behavior in a given situation.

BMBE. It is an acronym that stands for Barangay Micro Business Enterprise. Republic Act 9178, otherwise known as the BMBE Law, provides a definition of BMBEs as any business entity or enterprise engaged in the production, processing, or manufacturing of products or commodities, including agro-processing, trading, and services, of which the total assets shall not be more than P3,000,000.00. BMBE beneficiaries are the respondents of the study.

BMBE Law. This refers to R.A. 9178, or the Barangay Micro Business Enterprises Act of 2002, which encourages the formation and growth of barangay micro business enterprises (BMBE) by granting them incentives and other benefits. It provides a legal basis and a conceptual framework for the study.

Business Environment. This refers to a complex set of policy, legal, institutional, and regulatory conditions that govern business activities (White, 2018). The study tried to establish a significant connection between the business environment and the implementation of the BMBE Law.

Environmental Context and Resources. This domain refers to any circumstance of a person's situation or environment that discourages or encourages the development of skills and abilities, independence, social competence, and adaptive behavior (Huijg, 2014).

Formalization of Informal MSMEs. This pertains to reforms that are introduced to support the formalization of informal firms according to White (2018).

Knowledge. The domain refers to awareness of the existence of something. According to Huijg (2014), knowledge can be knowledge of the condition, procedural knowledge, or task environment.

Legal and Regulatory Exclusions. Huijg (2014) defines this as pertaining to reforms that exclude MSEs from the demands of full legal and regulatory compliance, especially within the application of tax and labor laws.

MSME. It is defined as Micro Small and Medium Enterprise, according to the Magna Carta for MSMEs or Republic Act 9501 referring to any business activity or enterprise engaged in industry, agribusiness and/or services, whether single proprietorship, cooperative, partnership or corporation of which the total assets have value as follow: micro: not more than P3,000,000, small: P3,000,001 - 15,000,000 and medium: P15,000,001 - P100,000,000. The respondents of the study belong to the micro-level.

MSME Development. This pertains to the sectoral plan crafted by the Department of Trade and Industry, together with various stakeholders from the private sector, academia, and government agencies, for the growth and advancement of the MSME sector.

Optimism. This domain refers to confidence that things will happen for the best or that desired goals will be attained. This can include optimism or pessimism (Huijg, 2014).

Preferential Treatment. This pertains to policy initiatives by the government that provide preferential treatment or privilege for firms based on their size or provide exclusions or exemptions from specific onerous or costly legal and regulatory responsibilities (White, 2018).

Reinforcement. This domain refers to increasing the probability of a response by arranging a dependent relationship, or contingency, between the response and a given stimulus. This can include rewards, incentives, and reinforcement (Huijg, 2014).

Social/Professional Role and Identity. The domain of social/professional role and identity refers to a coherent set of behaviors and displayed personal qualities of an individual in a social or work setting. This may include professional identity, professional role, and organizational commitment, among others (Huijg, 2014).

2. REVIEW OF RELATED LITERATURE AND STUDIES

This chapter presents the related literature and studies that are relevant to the conceptualization of the problem under investigation. It considers both foreign and local sources that helped in the conceptualization of this study.

2.1. Related Literature

2.1.1. Foreign

According to authors Lee and Kim (2017), the most successful economies in Asia after World War II were Chinese Taipei, Republic of Korea, Chinese Hong Kong, and Singapore. These four countries achieved economic heights mainly due to the development of MSMEs through effective government policy implementation, which brought strong impact on technological progress. Moreover, they say, Chinese Taipei is making a difference compared to the Philippines because their government policies were effective and able to provide an enabling business environment for their MSMEs.

In a report addressed to the Ministry of Local Government of Uganda, the World Bank (2016) recommended addressing issues pertaining to the informal business economy, who are suffering from the lack of access to finance, modern technology, skills, and market information to be able to upgrade their products. The report was part of a concerted effort by the World Bank in an effort to improve the capacities of local governments for promoting local economic development. Among their recommendations is that local governments provide Business Development Services such as financial literacy and business plan development.

According to White (2018), a poor business environment is said to disproportionately affect micro and small enterprises. He highlighted in his technical report for the Donor Committee for Enterprise Development that business environment problems micro and small enterprises face reduce their

competitiveness and inhibit their growth. The report also laments poor enforcement mechanisms as one of the main reasons why informality persists, in which laws and regulations are not implemented.

The legislation of business environment reforms and the implementation of related policies fall under the LGUs, including those granting incentives and reductions to the cost of local taxes for enterprises. Effective municipal management relates to the creation of an enabling environment for local businesses to prosper and, in turn, translate to economic development. In contrast, poor municipal management leads to poor service delivery and a lack of economic development (Meyer and Meyer, 2016).

On the other hand, public policy may be defined as a series or pattern of government activities or decisions that are designed to remedy some social problems. Therefore, the BMBE Law, to be translated into its meaning, must be implemented. However, the success of an adopted public policy depends on how successfully it is implemented (Khan, 2016).

2.1.2. Local

The national government has set the tone for a national policy to promote, support, strengthen, and encourage the growth and development of micro, small, and medium enterprises. Republic Act 9501 of 2008, or the Magna Carta for MSMEs, is geared towards the development of the Filipino entrepreneurial spirit by providing a business environment conducive to MSMEs. It mandates all government agencies working with small enterprises to pursue the principles of minimum regulation to ensure stability of rules and to encourage entrepreneurial spirit among the citizenry (Magna Carta for MSMEs Sec. 5, 2008).

At the local level, the main implementer of public policy is the Local Government Unit. They have the power and authority to accelerate local economic development and improve the quality of life in their respective localities accordingly, as mandated in the Local Government Code (Simplifying Business Permit and Licensing Process of Local Governments: A Toolkit, 2008). The LGU is also among the government agencies involved in business registration.

Republic Act 9178 is also known as the Barangay Micro Business Enterprises (BMBEs) Act of 2002. It was enacted to hasten the country's economic development by encouraging the formation and growth of barangay micro business enterprises which effectively serve as seedbeds of Filipino entrepreneurial talents, and integrating those in the informal sector with the mainstream economy, through the rationalization of bureaucratic restrictions, the active intervention of the government specially in the local level, and the granting of incentives and benefits to generate much-needed employment and alleviate poverty (BMBE Law Sec. 1-2, 2002).

Under Republic Act 10644, or the Go Negosyo Act of 2014, sole power was given to the Department of Trade and Industry to issue the Certificate of Authority for BMBEs (Go Negosyo Act Sec. 5-b, 2014). This was a task previously assigned to the Municipal Treasurer's Office of the LGU. This transfer of authority was set to ensure that the Law will be promoted unconditionally and that micro-entrepreneurs will be championed.

Yet, the implementation of the BMBE Law is problematic that it was even considered by some as a failure. Complaints about the BMBE Law implementation were highlighted, arising from the strict policies of the BIR thereby making it hard for MSMEs to avail the income tax exemption; the non-enjoyment of the benefits from the local level as MSMEs are still required to pay local taxes and fees despite registering as BMBEs; and the absence of a better access to finance suited for BMBEs as there are no special facilities created for them, according to Bangko Sentral ng Pilipinas. It really does seem that local government units are apprehensive about the unconditional granting of local tax exemptions given the possible reduction in their income (Dacanay, 2012).

2.2. Related Studies

2.2.1. Foreign

In a study conducted by Jianguo and Banwo (2015) examining the competitiveness of MSMEs in two distinct environments across two continents: Asia and Africa, with China and Nigeria as case studies, the importance of creating an enabling environment for MSMEs through the use of policy formation and regional infrastructural development was highlighted. MSMEs operate in a micro economy, and policies and economic decisions in the macro environment can either encourage or hold back their competitiveness. Their study shows that the high level of Chinese government commitment to MSME growth reflects the higher average on all the technological indices when compared with SMEs in Nigeria.

According to the study of Oo (2015), the creation of an enabling business environment is among the factors in small and medium-sized enterprise development. Oo identified the enabling policy and regulatory environment as main factors important in affecting the implementation of small and medium enterprise development involving the rice sector in Myanmar. This highlights the key role of policy implementation in creating a favorable policy and regulatory environment in which MSMEs can thrive.

In a study testing the relationship between the ease of starting a business measure of the regulatory environment and the annual firm registrations, Klapper and Love (2011) were able to identify business environment reformer factors. Their findings showed that the ease of starting a business is a significant predictor of new business registrations. Their study also showed that reforms produce a synergistic impact, meaning that if local governments do introduce reforms, they should be comprehensive.

On the other hand, according to Meyer (2014), the concept of an enabling environment is still not well embedded in government structures. Meyer noted that the reasons for such situations are: poor strategy formulation and implementation, lack of clear policy and priority direction by national and provincial government, and lack of capacity, skills, commitment, and budget. The findings of his study also suggest that restrictive legislative environments play a role in the strangulation of local government from being enabling.

The same conclusion was pointed out in the study of Pugalis and Tan (2017), that the lack of clarity on the role of local government in local and regional economic development is a serious issue. Also, the framing of economic development vis-à-vis the role of councils is paramount. According to them, how pertinent

councils view their role as economic development actors and how others perceive the role of councils in promoting local and regional economic development is a crucial factor conditioning the actual roles performed by councils.

2.2.2. Local

Universally, it is recognized that MSMEs are critical drivers of inclusive growth and economic progression so it is important to boost their resilience. According to Ballesteros and Domingo (2015), building MSME resilience has to be understood in the context of the business and policy environment in which they operate. They suggest that the local and national government needs to work with the private sector and the community to achieve improvements in business continuity and resilience.

According to Miranda and Miranda (2018), rural communities with MSMEs are empowered along the aspects of material, perceptual, and relational changes. This suggests that through MSMEs, rural people experienced changes in their lives. This also reinforces the value of MSME development, particularly towards rural communities. Their study also lauded the enactment of the BMBE Law in its efforts to spur economic development in the countryside by encouraging the formation and growth of BMBEs, which belong to the micro category.

Meanwhile, Briones (2016) emphasizes the idea that empowering households involves micro-business support, including finance, as well as other business services such as technical assistance, market linkages, and expedited business registration. His study linked inclusive business with the role of government policies and programs. According to him, the BMBE Law is important in fostering inclusiveness, as the law exempts barangay microenterprises from income tax and the minimum wage law, albeit there is a tall order of requirements before a BMBE can be exempted from income tax and access finance; it supposedly opens access to dedicated credit windows in government financial institutions.

Because of their dynamic and productive characteristics, MSME development is a key objective of many developing economies. Among the list of Philippine Government Policies and Programs targeting MSMEs, there are three laws advocating an enabling business environment: Magna Carta for Micro, Small and Medium Enterprises (R.A. No. 6977 as amended by R.A. No. 8289 and R.A. No. 9501); Barangay Micro Business Enterprises (BMBEs) Act of 2002 (R.A. No. 9178); and Go Negosyo Act (R.A. 10644). Medalla and Mantaring (2017) identified MSME barriers and constraints and grouped them into priority areas: (1) Building Management Capacity, (2) Entrepreneurship and Innovation, (3) Finance, (4) Business Environment, Market Access, and Internationalization. These barriers limit the capability of MSMEs to participate more actively and effectively in the international market, but it should be noted that such barriers, even though directed to MSMEs, are also applicable to micro enterprises.

As a final note, the Barangay Micro Business Enterprise (BMBE) Law is considered a pro-poor law to help microenterprises with their financial hurdle during the early years of their business operations. Yet despite this, it is suspected that not too many cities in the National Capital Region (NCR) in particular are implementing it. In a study, it was observed that only a few microenterprises registered and availed of its

benefits. Furthermore, the law was deemed still not fully functional due to the lack of incentives given to micro-enterprises at the local level (Carpio-Aldeguer, 2015).

2.3. Synthesis

The collation of literature and related studies has helped organize the whole direction of thought of the study by giving it clarity, examples, and theoretical basis. It has given the study a greater breadth of perspective and a deeper understanding of how and why policy implementation turns out as it is. The ideas gleaned from the literature and related studies contributed to reinforcing the possibility of local economic development through effective mechanisms.

In comparison, the present study also strives to embody the same positive ideals in the depicted literature and related studies in matters of endeavoring economic development by promoting a business-friendly environment, especially for micro-entrepreneurs. In contrast, the study goes beyond the usual breadth of policy implementation research and tries to find a connection with the present condition of the business environment. The present study gives faith to entrepreneurs and micro-enterprises in particular, for as Cunningham (2011) wrote, when embraced and nurtured, MSMEs are fully capable of providing employment opportunities and economic growth to developing economies.

3. RESEARCH METHODOLOGY

This chapter presents the research design, research locale, research respondents, research instrument, data gathering procedure, and statistical treatment.

3.1. Research Design

The study utilized a descriptive survey method. The method was deemed appropriate because it sought the present condition in the microbusiness industry. The study measured both quantitative and qualitative data through survey questionnaires administered to the proprietors and formal interviews with selected registered BMBE respondents to assess the level of implementation of the BMBE Law.

3.2. Research Locale

The study was conducted in the towns of Carrascal, Cantilan, Madrid, Carmen, and Lanuza (CarCanMadCarLan) in the Province of Surigao del Sur. These municipalities were specifically chosen for this study because the area was classified by the Department of Trade and Industry as a Provincial Agri-Industrial Center (PAIC). PAICs were developed as investment promotion tools and as a strategy for development across the provinces.

The municipality of Carrascal is a fourth-class municipality and forms the boundary between Surigao del Sur and Surigao del Norte. It is well known for its mining industry. Its micro-entrepreneurs are engaged in retail, with some also doing fish processing. It is noted by the DTI that the local government of Carrascal has no existing legislation supporting the implementation of the BMBE Law.

The municipality of Cantilan is a second-class municipality and originally encompassed the whole area of CarCanMadCarLan. The economic activity is largely dependent on agriculture, animal breeding, and coastal fishing. Its micro entrepreneurs are engaged in either retailing or food/fish processing. It is also noted by the DTI that Cantilan's local government has no existing ordinances supporting the implementation of the BMBE Law.

The municipality of Madrid is a fourth-class municipality and was named after the capital of Spain. It is considered the commercial hub of the CarCanMadCarLan area. Its micro-entrepreneurs are mostly in retail, trading either dry goods or agricultural and veterinary supplies, and many more. There are also no existing ordinances supporting the implementation of the BMBE Law in the municipality of Madrid.

The municipality of Carmen is a fifth-class municipality. It is also known for its cool spring. Carmen's main produce is rice and root crops. The municipality of Carmen, despite lacking ordinances supporting the implementation of the BMBE Law, provides tax incentives and discounts to registered BMBEs.

The municipality of Lanuza is a fourth-class municipality and is well known as a surfing destination. Lanuza's business opportunity is mainly dependent on agriculture, fishing, and eco-tourism. The municipality of Lanuza also has no existing ordinances supporting the implementation of the BMBE Law.

3.3. Research Respondents

The respondents of this study were the registered BMBEsin which the forms of business organization are single proprietorship, partnership, corporation, association, and cooperative. There were a total of 131 registered BMBEs in Carrascal, Cantilan, Madrid, Carmen, and Lanuza according to the records of Negosyo Centers Cantilan and Carrascal from January 2018 until February 2019. But the actual population size during the survey showed that only 110 BMBEs remained in operation, and all of them were able to answer the instrument. An interview was conducted in order to determine the problems met on the implementation of the BMBE Law.

3.4. Research Instrument

The study utilized an adopted modified questionnaire based on the study of Huijg et al. (2014) on the implementation of innovations in healthcare settings. Since the questionnaire focused on the implementation in healthcare settings, the researcher modified some indicators in order to customize them to the local setting and the purpose of the study.

The questionnaire is composed of three sections: A, B, and C, with a total of 56 items.

Section A asked about the business profile of the respondents. This included the respondent's principal business activity in terms of production, processing, manufacturing, retailing, and services. It also included the respondent's asset worth in a range of less than or equal to P250,000 up to P3,000,000 at most. Also included is the number of years in business, from one year or less up to twenty years at most.

Section B determined the condition of the business environment in the CarCanMadCarLan in terms of formalization of MSMEs, access to finance, and preferential treatment and legal/regulatory exclusions.

Section C determined the implementation of the BMBE Law in CarCanMadCarLan in terms of knowledge, social/professional role and identity, beliefs about capabilities, optimism, beliefs about consequences, reinforcement, and environmental context and resources.

Three (3) focal persons validated the questionnaire, one from each respective office: 1) DTI – Surigao del Sur Provincial Office, 2) DTI – Caraga Regional Office, 3) Office of then Senator Paolo Benigno Aquino IV.

To determine the reliability of the questionnaire, a pre-test was conducted with at least 30 registered BMBEs from outside the scope of the study, namely from Tandag City, Bislig City, Barobo, and Tagbina. The reliability of the data from this test was analyzed using Cronbach's Alpha to measure internal consistency.

It should also be noted that the content of the questionnaire was translated into the local dialect, so that the target respondents could fully comprehend its content and answer the questions.

3.5. Data Gathering Procedure

Permission from the Dean of the Graduate School was secured prior to the start of the study. During the pre-survey phase, the researcher modified the adopted questionnaire, and then submitted it for expert validation and tested it for reliability. Identification of target respondents per municipality was conducted in preparation for the utilization of the actual population size.

The survey phase commenced after all the necessary approvals were accorded to the researcher. The researcher personally administered the questionnaire to the respondents and retrieved the filled-out survey forms.

The post-survey phase included the screening of collected survey forms to check for invalidated forms, if any. The responses from the respondents were tabulated and analyzed. An interview was conducted after the consolidation of results.
Data collected from both the survey and interview were only used for the purpose of this research and will not be disclosed.

3.6. Statistical Treatment

The data gathered were interpreted using the following statistical tools:
1. Frequency count – this tool was used in determining the number of answers of the participants.
2. Percentage distribution – this tool was used in the profile of the respondents to determine the proportion of each corresponding category.
3. Weighted mean – this tool was used to assess the present condition of the business environment as well as the level of implementation of the BMBE Law to select municipalities of CarCanMadCarLan.
4. Pearson Product-Moment Correlation – this tool was used to quantify the significant relationship between the profile of the respondents and the present condition of the business environment and the implementation of the BMBE Law, and the significant relationship between the BMBE Law and the Business Environment.
5. Cronbach's Alpha (alpha test) – this tool was used to determine the reliability of the questionnaire.

4. RESULTS

4.1. PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This chapter presents, analyzes, and interprets data gathered from the registered BMBEs within CarCanMadCarLan.

In terms of business activity, the majority of the respondents consist of retailers or those engaged in trading activities, comprising 82 or 75% of the total population of registered BMBEs in CarCanMadCarLan, while the least represented business activity was manufacturing, with just one or 1% of the total population of registered BMBEs. This result coincides with the data from the DTI provincial office, showing that the predominant form of business operation is retail/trade.

Many entrepreneurs choose retail/trade businesses such as sari-sari stores because they are not capital-intensive and are relatively easy to manage. But the problem for these MSMEs is that they face constraints that can be categorized into (1) non-financial barriers (cost of getting electricity, heavy regulation, high tax rates, and corruption) and (2) financial barriers (access to finance), according to the Senate Planning Office (2012).

In terms of total assets, despite all of the respondents belonging to the micro entrepreneur's sector, most of them, about one hundred three (103) or 94%, reported having assets of 250,000 or below. On the other hand, there were only two, or 2%, having assets of 1,500,000 at most. In 2010, there were a total of 777,687 business enterprises in the Philippines, of which MSMEs represented 99.6% with 774,664 establishments (Senate Planning Office, 2012).

However, having a relatively small amount of assets does not benefit the MSMEs much, for they are not given that much importance in terms of financing from financial institutions. Despite their dominant numbers, they have difficulty accessing formal credit. As cited by Medalla (2016), banks are reluctant to lend because they regard MSMEs and micro-enterprises as high-risk borrowers since most have no business plans, lack assets that can be used as collateral, and have practically no financial records or accounting system.

In terms of the number of years in business operation, most of the respondent BMBEs' tenure in terms of business operation is relatively young, having been operating their small business enterprise for just over 2–5 years, or just 68% of the total population of respondents. On the contrary, businesses operating for 11-15 years and 16-20 years only make up 2% of the total population.

Based on the above data, it is evident that most micro-enterprises, in general, find it difficult to sustain their business operation for over ten years. Most micro-enterprises struggle and eventually close. Ballesteros (2015) said that the startup stage of setting up a BMBE could be likened to an enterprise struggling to continue business activities amid operational difficulties during and after disaster events in a study about business resiliency. Carpio-Aldeguer (2015) cited that lack of incentives is among the main

reasons why microenterprises are not able to reach their full potential and graduate into larger entities in the study entitled Extensive Implementation of the BMBE Law: An Assessment Across Metro Manila.

Table 4 shows the present condition of the business environment in CarCanMadCarlan in terms of formalization of MSMEs, access to finance and preferential treatment, and legal/regulatory exclusions. Overall, with an average weighted mean of 2.41, respondents felt somewhat dissatisfied with the current streamlining processes for businesses. The state of financial access afforded to registered BMBE respondents reflected an average weighted mean of 2.43, in which the respondents felt somewhat dissatisfied.

Furthermore, Table 4 shows the degree of dissatisfaction registered BMBE respondents feel about the preferential treatment and legal/regulatory exclusions afforded to them by the government in general. With an average weighted mean of 2.28, the currently implemented processes received a dissatisfaction rating among the respondents. This sentiment most likely caused the BMBE Law to be deemed still not fully functional due to the lack of incentives given to micro-enterprises at the local level, as observed by Carpio-Aldeguer (2015).

To address the issue of dissatisfaction that BMBEs hold over the condition of the business environment in terms of access to finance and preferential treatment and legal/regulatory exclusions (either fiscal or non-fiscal), the researcher conducted a follow-up interview with the respondents.

From the answers gathered from the respondents during the follow-up interview, the researcher was able to come up with a proposal for a provincial business conference in coordination with the Tandag Chamber of Commerce. The Tandag Chamber of Commerce, starting last September 2019, spearheaded the Provincial Business Conference, first held in Tandag City. The event gathered the different business stakeholders across the province of Surigao del Sur to discuss matters about the welfare of the business sector.

Table 6 presents the level of implementation of the BMBE Law in terms of knowledge, social/professional role and identity, beliefs about capabilities, optimism, beliefs about consequences, reinforcement, and environmental context and resources. With an average weighted mean of 2.59, social/professional role and identity is mostly implemented.

BMBE respondents see the government, in general, performing their social/professional role and identity concerning the implementation of the BMBE Law. This can be attributed to the presence of Negosyo Centers in Cantilan and Carrascal, which take charge in the registration of BMBEs and promulgation of the law.

In the case of optimism that registered BMBE respondents hold over the implementation of the BMBE Law in general, an average weighted mean of 1.93 from the respondents clearly shows there is not much confidence in the implementation of the BMBE Law.

During the interview, the researcher gathered the opinions of the respondents. Based on these, it shows that the BMBE Law is not fully implemented in the CarCanMadCarLan area. But this does not seem to be an isolated case. Several studies suggest that under-implementation of the BMBE Law occurs at a national level.

Acknowledging the fact that there are gaps in the implementation of the BMBE Law and the condition of the business environment based on the data presented, the researcher solicited the respondents for possible solutions and suggestions to the problems encountered to address the issues at hand. It is also based on these that the researcher is determined to realize the proposed activity as an intervention, addressing the problems stated above.

The activity is also a perfect opportunity for the crafting of policy guidelines and dialogue between legislators, mayors, national government agencies, and BMBEs to address the issue of dissatisfaction over the lack of supporting ordinances that promote the implementation of the BMBE Law, particularly the granting of tax incentives or discounts. If the issues concerning the condition of the business environment are addressed, and solutions are provided afterward, then the level of optimism that BMBEs feel about the implementation of the BMBE Law will certainly improve.

Table 9 shows the absence of a significant relationship between the profile of the respondents and the present condition of the business environment. Subsequent tests were made, and the results imply that there is no significant relationship between the profile (Principal Business Activity) of the respondents and the present condition of the business environment, as it fails to reject the null hypothesis. The computed r-value of 0.167 and the p-value of 0.081 imply that there is no significant relationship between the profile (Total Assets) of the respondents and the present condition of the business environment, as it fails to reject the null hypothesis. The computed r-value of 0.148 and the p-value of 0.123 imply that there is no significant relationship between the profile (Number of years in business) of the respondents and the present condition of the business environment, as it fails to reject the null hypothesis.

Table 10 shows the absence of a significant relationship between the profile of the respondents and the level of implementation of the BMBE Law. Subsequent tests were made, and the results imply that there is no significant relationship between the principal business activity of the respondents and the level of implementation of the BMBE Law, as it fails to reject the null hypothesis. The computed r-value of 0.008 and the p-value of 0.937 imply that there is no significant relationship between the total assets of the respondents and the level of implementation of the BMBE Law, as it fails to reject the null hypothesis. The computed r-value of 0.200 and the p-value of 0.076 imply that there is no significant relationship between the profile of the respondents as to the number of years in business and the level of implementation of the BMBE Law, as it fails to reject the null hypothesis.

Table 11 shows the significant relationship between the BMBE Law Implementation and Business Environment. Subsequent tests were made at the 5% level of significance. The computed r-value is 0.631, and the p-value is 0.000. Since the r-value is closer to 1 and the p-value is less than 0.05, this implies that we reject the null hypothesis. Therefore, there is a significant relationship between the level of

implementation of the BMBE Law to which the respondents are subjected and the condition of their business environment to which the respondents belong. This further implies that the condition of the respondents' business environment depends on the level of implementation of the BMBE Law.

5.

5.1. SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the summary of the study. Based on the findings, conclusions were drawn, and recommendations are presented.

5.1.1. Summary of Findings

Based on the analyzed data, the following are the summarized findings:

Most of the respondents reported retailing/trading as their principal business activity having total assets of P250, 000.00 at most and the number of years in business for two to five years.

Pertaining to the present condition of the business environment, most of the respondents rated somewhat satisfied in terms of formalization of MSMEs, but most of them were somewhat dissatisfied in terms of access to finance and preferential treatment and legal/regulatory exclusions.

As to the level of implementation of the BMBE Law, the majority of the respondents rated knowledge as mostly implemented, social/professional role and identity as mostly implemented, beliefs about capabilities as partially implemented, optimism as partially implemented, and beliefs about consequences as mostly implemented. The same respondents rated somewhat disagree for reinforcement and somewhat disagree for environmental context and resources.

Some of the problems encountered by the respondents were the lack of legislated ordinances that support the implementation of the BMBE Law and the absence of better access to finance suited for BMBEs, as there are no special facilities created for them despite the BMBE Law clearly stating otherwise in Section 9 under Incentives and Benefits.

The study was able to establish that there is no significant relationship between the profile of the respondents and the condition of the business environment.

There is no significant relationship shown between the profile of the respondents and the level of implementation of the BMBE Law.

Between the BMBE Law implementation and the condition of the business environment, the study was able to establish a significant relationship.

5.1.2. Conclusions

Based on the findings, the following conclusions were drawn:

Most of these non-capital-intensive businesses are sari-sari stores. Although sari-sari stores are relatively popular among BMBEs, these micro-entrepreneurs have a very limited number of resources, and there are so many barriers to their development, based on the study of Medalla and Mantaring (2017).

The condition of the business environment in the areas of Carrascal, Cantilan, Madrid, Carmen, and Lanuza is marred by the absence of financial institutions that offer special credit windows for BMBEs. Although there are local banks in the CarCanMadCarLan area, they do not give BMBEs special rates in terms of credit facilities.

The same sad scenario holds for the Government Service Insurance System (GSIS) and Social Security System (SSS). Still under Section 9 of RA9178, these two institutions supposedly should accommodate members who wish to set up barangay micro business enterprises at a special rate entitled to BMBEs only.

Adding to the inhospitable business environment pervading the CarCanMadCarLan area is the lack of exemption granted to BMBEs from paying local income tax and other municipal charges. In the CarCanMadCarLan area, only the Municipal Government of Carmen, Surigao del Sur grants registered BMBEs in their municipality a reduction in local government tax.

The implication of the lack of implementation of the BMBE Law in terms of beliefs about capabilities, optimism, reinforcement, and environmental context and resources is palpable as local government units fail to support the BMBE Law. A concrete proof substantiating this conclusion is the lack of enactment or adoption of the BMBE Law at the local government level as a national law pertaining to micro-entrepreneurs' welfare.

BMBEs are also entitled to avail of the various trainings and capability development at their disposal through the different national government agencies (Sec.12, R.A 9178), well-funded through funds from the Philippine Amusement and Gaming Corporation (Sec. 13, R.A. 9178). However, due to the lack of related policy at the LGU level, all these benefits are lost to BMBEs.

This study was able to conclude that the condition of the business environment is not influenced or affected by the respondents' profile. This is evidenced by the absence or lack of an established significant relationship between the respondents' profile and the condition of the business environment. Based on this, it is clear that forging a favorable condition of the business environment is not the responsibility of the business sector.

Likewise, it is also evident that the profile of micro-entrepreneurs has no bearing whatsoever on the level of implementation of the BMBE Law, as evidenced by the lack of an established significant relationship between the two. This can be construed instead that effective implementation of the BMBE Law has no

bearing at all when it comes to the profile of businesses but instead has bearing with regard to the policies set by local government units.

Ultimately, the study was able to grasp a significant relationship between the condition of the business environment and the implementation of the BMBE Law. All the evidence led the study to unravel the factors and the relationship between the condition of the business environment and the degree or means of implementation of the BMBE Law, proving that one affects the other. This highlights the implications of the poor or under-implementation of the BMBE Law, as it resonates drastically with the condition of the business environment.

This conclusion also brings us to the fact that active leadership or political will coming from both the executive and legislative bodies of the municipal government is necessary if a favorable business environment condition is to be pursued.

5.1.3. Recommendations

Based on the findings and conclusions of this study, the following recommendations are offered:

The local government unit must sponsor an ordinance that supports the implementation of the BMBE Law in the municipality.

Financial institutions such as government-controlled banks and privately owned banks must offer better access to finance suited for BMBEs by creating special credit facilities specifically for them.

A BMBE Law Orientation Seminar cum Open Forum must be conducted to facilitate the dialogue between proponents and stakeholders.

A provincial business conference to be attended by different groups in the business sector, the local government units, and national government agencies from the province of Surigao del Sur.

Future researchers should conduct further studies on determining the Level of Implementation of the BMBE Law, not just within CarCanMadCarLan.

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Learning from the Learners: A Study on Creating an MSME- Centric Learning Institute for Microfinance Institution

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ABSTRACT

Aside from financial services, micro-finance institutions in the Philippines also provide non-financial services to its thousands of clients to ensure higher level of business and personal development. Capacity building training is among the most common non-financial services offered by MFIs to the MSME sector. Thus, this study aims to understand the needs, acceptability, and preferences of MSMEs for a learning institute in a micro- finance institution. Methods for the study were both qualitative and quantitative research through surveys and interviews with both micro-finance clients and non-clients. Data mining was also done to assess existing training facilities available for MSMEs across different providers and channels. Descriptive statistics were used to analyze demographic data and a chi-square test was applied to evaluate the association between profile parameters and other select variables. Respondents were seen to generally lack business-related training but are committed to learning and participating in training best suited for them and their respective businesses. MFI clients were also seen to be keener on attending and shelling out money for training. Meanwhile, preferences on training specifics like schedule, time, and venue were seen to be correlated to the industry that they are a part of. Thus, recommendations highlight the importance of devising appropriate training while considering the respondents' limitations and capabilities. Consequently, increasing the economic value and social impact of their businesses and strengthening their capacity in managing their businesses simultaneously must be prioritized. This information can be beneficial for organizations that cater to MSMEs by providing avenues for learning and development of businesses involved in the
Sector.

Keywords: learning institute, business development; capacity building

1. INTRODUCTION

The phrase knowledge is power runs true even for business owners. Studies have shown that enterprise-development training programs are seen to significantly improve entrepreneurial competencies (Al Mamun, et al, 2019). Entrepreneurship training components also contribute towards business growth of micro and small entrepreneurs (Mukulu & Marima, n.d.). A study on Tanzanian micro and small entrepreneurs also showed that business skills are vital for their performance, growth, and improved living standards of business owners (Kessy & Temu, 2010).

In the Philippines, MSMEs cover 99.58% of the total number of business enterprises. They also hold 63% of the country's workforce. Their high contribution to the Philippines economy shows the need for training and development of their businesses.

Among the institutions that provide support for MSMEs training are private organizations like microfinance institutions (MFIs). Microfinance is a type of lending that provides capital to low income business owners who may be excluded from traditional credit and lending options. Microfinance offerings include small loans – called microloans, savings accounts (microsavings) and insurance policies

(microinsurance). (D'Angelo, 2023) In the Philippines, microfinance institutions (MFIs) are not only micro-credit providers, but they are also considered as the government's partner in its strategies to alleviate poverty (Bangko Sentral ng Pilipinas, 2013).

Because of this push to be an arm in poverty alleviation, MFIs all over the country have been offering various programs and services targeted to help their clients. Aside from financial services, non-financial offerings are also the usual resources that these organizations offer to their target market. Most common of these non-financial services are training for the micro-entrepreneurs.

A stark example of this is the CARD MRI Development Institute (CMDI), a member institution of the Mutually Reinforcing Institutions of the micro-finance organization, Center for Agricultural and Rural Development (CARD). It is the first School of Microfinance and Development in the Philippines, recognized by the DepEd, CHED, and TESDA.

Another example of entities that emphasize developing entrepreneurs and their businesses through training are social enterprises. In the Philippines, most social enterprises are organizations targeted at benefiting the marginalized sector, such as farmers, fisherfolks, and persons with disabilities. In 2013, around 20% of the country's enterprises had economic and social goals (Dacanay, 2013), supporting up to 2.5 million poor Filipinos (Basa, 2014). An example of a social enterprise in the Philippines is Hapinoy, a network of micro-entrepreneurs, particularly sari-sari store owners. Hapinoy, as shown in the figure below, banks on the communities created by sari-sari stores and aims to eventually harness the store network to provide access to high-impact products and services.

Gawad Kalinga's Enchanted Farm (GKEF) is another social enterprise that brands itself as a farm village university, Disneyland for social tourism, and Silicon Valley for social entrepreneurship. It is a "social business incubator" banking on the symbiotic relationship among GKEF's major programs and activities (Habaradas et al., 2019).

Despite different studies showing positive impact of trainings to MSMEs, and various organizations providing these services, other researches reveal the need for improvement of the trainings given to microentrepreneurs. No research has also yet focused on creating a learning institute that would be most beneficial for MSMEs, especially in a Philippine context. Thus, this study aims to learn the needs and preferences of micro-entrepreneurs that are MFI clients in
terms of learning and development. This will serve as guide for MFIs and other social enterprises whose target markets are MSMEs as they establish learning institutes and training programs for the development of the lives and businesses of their clients.

2. OBJECTIVES

The project aims to gather perceptions of micro-entrepreneurs on a Learning Institute. Specifically, it seeks to:

1. Learn the profile of the micro-entrepreneurs.
2. Understand the perception, learning status, access, preferences, and acceptability of micro-entrepreneurs on trainings, related support services needed, and training providers.

3. Obtain information on the different providers or organizations in the industry who have institutionalized learning and development programs geared towards providing continuous training, adapted models, and best practices.

4. Determine the significant association of profile to perception, learning status, access, preferences, and acceptability of micro-entrepreneurs on trainings, related support services needed, and training providers.

5. Provide recommendations on the establishment of a Learning Institute for MFI clients

3. REVIEW OF RELATED LITERATURE

A study on the impact of micro-enterprise development training and entrepreneurial competencies among low-income households in Malaysia shows that training programs have significantly affected opportunity recognition competency, organizing competency and relationship competency (Mamun, et. al., 2019). Another research in Kenya indicates positive impact of training to business growth (Mukulu & Marima, n.d.).

The same study in Kenya, however, confirmed that although trainings have resulted in good changes in the business of microentrepreneurs involved, there is still a need for more development in the content and delivery method of the training. Other studies have also shown the need for a more cohesive and tailor- fitted approach to training for micro-entrepreneurs.

A study on female microfinance clients that attended business skills training program in Peru showed that although it improved MFI client retention rates and had small positive impacts on selected business practices, it had negligible effects on the other factors that were assessed, including that of profitability and business performance (Karlan & Valdivia, 2011).

Poverty Action Lab's review of 22 randomized evaluations shows that being offered business skills training often increased learning or use of some business practices, but this did not always translate to significant increases in profits. Assumptions on why this occurred include the research design not being able to record potential increase of profit albeit not very substantial, that these programs did not teach the most relevant skills for the ever-evolving set of challenges microentrepreneurs face, or that business training programs did not adequately address other significant barriers, like financial or gender-related constraints.

A review of other studies on training for micro-entrepreneurs also showed that participants applied some of the practices they learned from business training programs[2] at first but often reverted back to old practices over time. Business training programs were also seen to focus on a broad set of general skills that small-scale microentrepreneurs may not perceive to be useful or applicable to their business.

Poverty Action Lab highlighted that providing trainings so microentrepreneurs can improve their business practices may be insufficient to spur business growth if the owners themselves are facing additional issues like financial challenges and restrictive social or cultural norms. The same assessment showed that trainings for business skills were well attended at first. However, over time, the training participants started to drop out and did not meet the course completion, which made it difficult to identify whether the trainings were able to increase profits of the microentrepreneurs.

Thus, the organization mentioned the need for more studies that examine what barriers MSMEs

face for business growth, so it will be useful in crafting programs that not only aim to improve their learning but also create sustainable impact.

In the University of the Philippines Institute for Small-Scale Industries' recommendation for the implementation of the Department of Trade and Industry's 7Ms of Successful Entrepreneurs, it highlighted the importance of improving the training programs on entrepreneurship, particularly in the curricular and instructional enrichment.

By acknowledging the need for improvement of the trainings provided to MSMEs, organizations can learn what works best for the development of the microentrepreneurs, so the goal of these learning activities can be effectively met.

Since microfinance institutions are among the organizations that directly target MSMEs as their beneficiaries for their financial and non-financial services, it is important that they are armed with the right tools and knowledge in the provision of trainings, especially through a learning institute. Microfinance and Entrepreneurship Training's study noted that entrepreneurial orientation is so vital for entrepreneurs to develop entrepreneurial skills. (Saqran, 2019; Bernard, 2015). There is a need to include small business owners to increase their efforts to acquire information, especially peers, family members, and seminars if they want to be successful (Abeson, 2009).

There is a need to marry financial and non-financial services in terms of microfinance business. In one of the studies in Peru, it was noted that a successful entrepreneur needs to be trained. A successful entrepreneur needs to engage in acceptable business practices that lead to increased sales (Karlan et al., 2006). Therefore, successful training helps a company create a long-term lead in a market (De Brito et al., 2020; Selvaraj et al., 2018; Hadi et al., 2015).

4. CONCEPTUAL FRAMEWORK

The figure below shows the conceptual framework for the study.

The research will focus on understanding both MFI and non- MFI clients. Information about these two groups will be gathered and analyzed. Data covered would include their demographic profile, perception, and learning status, access to training and training requirements, preferences and acceptability. These would be used to create a concept for a learning institute that would be matched to the needs and preference of the target market which are the MSMEs.

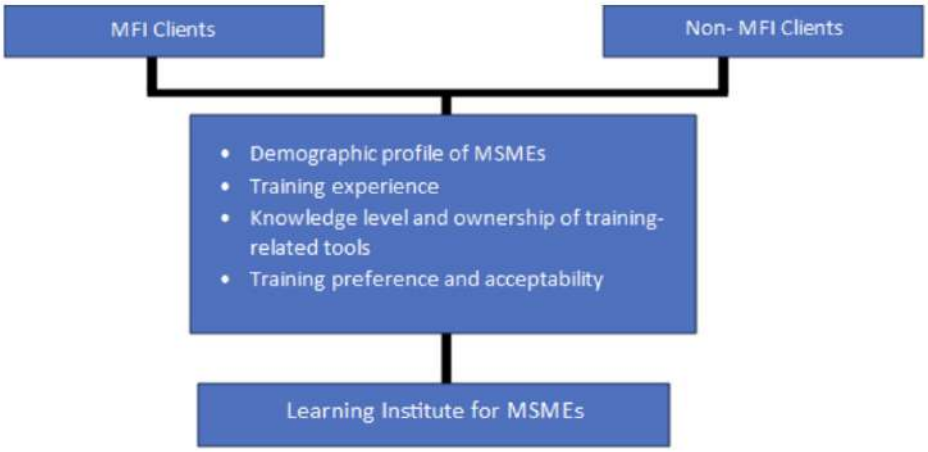


Figure 1. Conceptual Framework

4.1 Definition of terms

Micro-entrepreneurs- individuals involved in micro, small, and medium enterprises in the Philippines.

Clients- micro-entrepreneurs that are availing financial services from a micro-finance institution.

Non- clients- micro-entrepreneurs that were not availing of financial services from a micro finance institution.

Micro-finance institution- an organization that provides financial and non-financial services to micro-entrepreneurs.

Learning institute- provides services related to learning to its selected beneficiaries. Services could include skills, business, and personal development trainings.

5. Methodology

5.1 Research design

The project employed mixed methods (quantitative and qualitative). Survey questionnaires were utilized. Google Forms and interviews using a phone and other online platforms (e.g., Zoom, Google Meet, Facebook Messenger) were used.

5.2 Research respondents

A total of 174 respondents were interviewed, which included adult micro-entrepreneurs from different types of businesses. 92 were interviewed via phone calls while 82 answered the Google Forms sent. Respondents were divided into MFI clients and non-MFI clients to assess difference of insights. MFI

clients were randomly sampled loaners from a specific MFI with branches across the country.

Sample size was identified based on the representative sample for the identified MFI's total number of clients. A margin of error of 10 and confidence level of 95% was utilized to get the number for the representative sample.

5.3 Research area

The project covers the districts of Bohol, Cebu North, Cebu South, Leyte, Misamis Oriental, Negros Occidental, Negros Oriental, Bicol, Panay, and Samar.

5.4 Research instrument

The questionnaire was composed of three main parts: 1) Demographic profile, 2) Four-point Likert-scale on perception, learning status, access, preferences and acceptability of micro-entrepreneurs on trainings, related support services needed and training providers, and 3) open-ended questions on the different trainings and related support services given by providers in the MSME industry. The questionnaire was face-validated and tested for Cronbach alpha for internal reliability.

5.5 Data gathering

Potential respondents were initially contacted via phone calls, mobile text messaging, and private messaging using Facebook (via Facebook Marketplace). Upon obtaining consent to participate, an interview was scheduled (via phone or other platforms). If applicable or preferred, a google form link was also sent to the respondent to answer in lieu of the phone interview. Data was encoded in Microsoft Excel. In cases where clarifications on answers were needed, respondents were contacted again using mobile text messaging or Facebook Messenger.

5.6 Statistical analysis

The respondent's profile results were tabulated and analyzed using Statistical Package for the Social Sciences (SPSS) software. Descriptive statistics was employed. The association between clientship and most parameters was evaluated using the Chi-square test. Independent t-test and paired t-test were also used. All the significance levels were set at 5% level.

6. Results and Discussion

6.1 Profile of respondents

The details of the respondents' profiles can be found in Table 1.

Table I. Profile of microentrepreneur respondents (MFI client and non-MFI client) in select Philippine areas (n=174)

Parameters	Client		Non-client		Total	
	freq	%	freq	%	freq	%
Area						
Bicol	10	5.7	5	2.9	15	8.6
Bohol	10	5.7	5	2.9	15	8.6
Cebu North	14	8.0	5	2.9	19	10.9
Cebu South	13	7.5	6	3.4	19	10.9
Leyte	16	9.2	6	3.4	22	12.6
Misamis Oriental	11	6.3	5	2.9	16	9.2
Negros Occidental	10	5.7	5	2.9	15	8.6
Negros Oriental	11	6.3	5	2.9	16	9.2
Panay	16	9.2	5	2.9	21	12.1
Samar	11	6.3	5	2.9	16	9.2
Total	122	70	52	30	174	100
Age						
22 and below	3	1.7	13	7.5	16	9.2
23-30	19	10.9	**22**	**12.6**	41	23.6
31-40	33	19.0	10	5.7	43	24.7
41-50	**37**	**21.3**	3	1.7	40	23.0
50 and above	30	17.2	4	2.3	34	19.5
Total	122	70.1	52	29.9	174	100.0
Sex						
Male	6	3.4	9	5.2	15	8.6
Female	**116**	**66.7**	**43**	**24.7**	**159**	**91.4**
Total	122	70.1	52	29.9	174	100.0
Civil Status						
Single	22	12.6	29	16.7	51	29.3
Married	**70**	**40.2**	**13**	**7.5**	**83**	**47.7**
Live-in	23	13.2	10	5.7	33	19.0
Widowed	5	2.9	0	0.0	5	2.9
Separated	2	1.1	0	0.0	2	1.1
Total	122	70.1	52	29.9	174	100.0

Educational Attainment						
Elementary graduate/level	20	11.5	2	1.1	22	12.6
Highschool graduate/level	**62**	**35.6**	**14**	**8.0**	76	**43.7**
College level	26	14.9	18	10.3	44	25.3
College graduate	12	6.9	16	9.2	28	16.1
Post-graduate	0	0.0	1	0.6	1	0.6
Technical Vocational course graduate	2	1.1	1	0.6	3	1.7
Total	122	70	52	30	174	100.0
Number of years in MFI						
Half year and below	30	24.6	-	-	30	24.6
More than half year to 1 year	**42**	**34.4**	**-**	**-**	**42**	**34.4**
More than 1 year to 2 years	24	19.7	-	-	24	19.7
More than 2 years to 3 years	11	9.0	-	-	11	9.0
More than 3 years	15	12.3	-	-	15	12.3
Total	122	100.0	-	-	122	100.0
Loan Amount (for MFI Clients)						
10,000 and below	**85**	**69.7**	**-**	**-**	**85**	**69.7**
10,001 to 20,000	29	23.8	-	-	29	23.8
20,001 to 30,000	5	4.1	-	-	5	4.1
50,000-100,000	1	0.8	-	-	1	0.8
Prefer not to say	2	1.6	-	-	2	1.6
Total	122	100	-	-	122	100
Status of Business Registration*						
with DTI	3	1.7	7	4.0	10	5.7
Barngay Business Permit	31	17.8	13	7.5	44	25.3
Mayor's Permit	2	1.1	7	4.0	9	5.2
with BIR	0	0.0	4	2.3	4	2.3
Not Registered	**89**	**51.1**	**36**	**20.7**	**125**	**71.8**
Business type (pre-COVID)*						

Trading, Merchandising, Buy and Sell	**78**	**44.8**	**33**	**19.0**	**111**	**63.8**
Food Business/Food Vending	47	27.0	20	11.5	67	38.5
Agriculture	3	1.7	1	0.6	4	2.3
Fisheries and Aquatics	2	1.1	1	0.6	3	1.7
Graphics, Design, Arts and Crafts	1	0.6	1	0.6	2	1.1
Services	8	4.6	1	0.6	9	5.2
Monthly Income (Pre-COVID) (in PHP)						
10,000 and below	**74**	**42.5**	**37**	**21.3**	**111**	**63.8**
10,001-20,000	33	19.0	10	5.7	43	24.7
20,001-30,000	11	6.3	3	1.7	14	8.0
30,001-40,000	2	1.1	0	0.0	2	1.1
40,001-50,000	1	0.6	0	0.0	1	0.6
50,001 and above	1	0.6	2	1.1	3	1.7
Total	122	70.1	52	29.9	174	100.0
Business Type (Post-COVID)*						
Trading, Merchandising, Buy and Sell	**81**	**46.6**	**32**	**18.4**	**113**	**64.9**
Food Business/Food Vending	44	25.3	19	10.9	63	36.2
Agriculture	2	1.1	2	1.1	4	2.3
Fisheries and Aquatics	1	0.6	0	0.0	1	0.6
Graphics, Design, Arts and Crafts	1	0.6	2	1.1	3	1.7
Services	9	5.2	0	0.0	9	5.2
Monthly Income (Post-COVID) (in PHP)						
10,000 and below	**90**	**51.7**	**40**	**23.0**	**130**	**74.7**
10,001-20,000	27	15.5	9	5.2	36	20.7
20,001-30,000	2	1.1	0	0.0	2	1.1
30,001-40,000	1	0.6	0	0.0	1	0.6
50,001 and above	2	1.1	2	1.1	4	2.3
Total	122	70	51	29	173	99

A total of 174 respondents, including MFI clients and non-MFI clients, were surveyed across various regions in the Philippines: Bicol, Bohol, Cebu North, Cebu South, Leyte, Misamis Oriental, Negros

Occidental, Negros Oriental, Panay, and Samar.

The MFI-client group predominantly consisted of females (91.4%), primarily aged 31-40 (24.7%), married (47.7%), and with a high school education or equivalent. Conversely, non-MFI clients were mostly female (24.7%), aged 23-30 (12.6%), single (16.7%), and with some college education (10.3%).

Among MFI clients, 34.4% had memberships exceeding half a year to one year and typically borrowed 10,000 pesos or less (69.7%). Most respondents (both MFI and non-MFI clients) operated unregistered businesses (71.8%). Pre-pandemic, both groups were engaged in trading, merchandising, and buy-and-sell activities (63.8%) with monthly incomes of 10,000 pesos or lower (63.8%). Post-pandemic, more respondents reported monthly incomes of 10,000 pesos or less (74.7%), and the prevalence of the mentioned business types increased slightly (from 63.8% to 64.9%).

6.2 Business training background of the MFI clients and non-clients' micro-entrepreneurs

Table 2 shows the details of the respondents' business training background.

Business-Related Training: A significant proportion of respondents, including both MFI clients (48.3%) and non-clients (28.2%), had not received any business-related training. This lack of training may be linked to their confidence levels in managing their businesses.

Training Providers: Among MFI clients (10.9%) who did attend training, some selected "others" as their training provider, implying that the training did not come from the MFI. Surprisingly, 4.1% of MFI clients identified the MFI as their training provider. This suggests that clients might not readily associate the MFI with their training source, posing a challenge for the MFI to tailor training programs to client interests.

Duration of Training: Most MFI clients who engaged in business-related training (10.3%) attended sessions lasting 0.5-4 hours, aligning with findings from Ayiglo and Aziebor (2015) where respondents preferred shorter training sessions. In contrast, non-clients attended longer sessions, which, although potentially beneficial for learning (Goyal, 2015), might not align with MFI clients' preferences for shorter training.

Training Fees: The majority of both MFI clients and non-clients (22.4%) attended training for free. This no-cost access to training attracted microentrepreneurs. However, those who received free training may not be as committed to the program since they did not invest financially in their participation.

Training Platforms: Most respondents (21.8%) who underwent training chose on-site sessions, while very few opted for online (1.1%) or webinar (0.6%) platforms. On-site training may offer a more engaging learning experience due to in-person interactions compared to online or webinar formats.

Table 2. Business training background of microentrepreneurs MFI client and non-MFI client) in select Philippine areas (n=174)

Parameter	Client		Non-client		Total	
	freq	%	freq	%	freq	%
Business-Related Trainings Attended						
Aggressive Irrigation Training	1	0.6	0	0.0	1	0.6
Agriculture-seminar	1	0.6	0	0.0	1	0.6
Baking	2	1.1	0	0.0	2	1.1
Barangay Nutrition Scholar	1	0.6	0	0.0	1	0.6
Beauty	1	0.6	0	0.0	1	0.6
BHW	1	0.6	0	0.0	1	0.6
BPI Training	1	0.6	0	0.0	1	0.6
Business Microfinance	1	0.6	0	0.0	1	0.6
Business Planning	1	0.6	0	0.0	1	0.6
Business Trainings	1	0.6	0	0.0	1	0.6
Cookery	1	0.6	0	0.0	1	0.6
Cooking raining for Entrepreneurs	0	0.0	1	0.6	1	0.6
Del Monte Training	1	0.6	0	0.0	1	0.6
Dungganon MF	1	0.6	0	0.0	1	0.6
Fish Vending	1	0.6	0	0.0	1	0.6
Food Handler	1	0.6	0	0.0	1	0.6
Food Processing	1	0.6	0	0.0	1	0.6
Frontrow	1	0.6	0	0.0	1	0.6
Health Training	1	0.6	0	0.0	1	0.6
hospitalization	1	0.6	0	0.0	1	0.6
livestock and poultry	1	0.6	0	0.0	1	0.6
Loan training	1	0.6	0	0.0	1	0.6
Manager training	1	0.6	0	0.0	1	0.6
Managerial Position	1	0.6	0	0.0	1	0.6
Marketing Training	0	0.0	1	0.6	1	0.6
Meat / Food Processing	1	0.6	0	0.0	1	0.6
meat processing	1	0.6	0	0.0	1	0.6
Microentrepreneur	1	0.6	0	0.0	1	0.6
MFI Orientation	3	1.7	0	0.0	3	1.7
Sales training (general)	1	0.6	0	0.0	1	0.6

Starting and Growing my Business	0	0.0	1	0.6	1	0.6
training before loan	1	0.6	0	0.0	1	0.6
Unilever "business"	1	0.6	0	0.0	1	0.6
Vita Plus Trainings	1	0.6	0	0.0	1	0.6
Women's training agriculture	1	0.6	0	0.0	1	0.6
Womens, Barangay Health Workers and BLT	1	0.6	0	0.0	1	0.6
World Vision Patawid	1	0.6	0	0.0	1	0.6
None	**84**	**48.3**	**49**	**28.2**	**133**	**76.4**
Other (diving)	1	0.6	0	0.0	1	0.6
Total	122	70.1	52	29.9	174	100.0
Training Provider						
MFI	5	4.1	1	2	6	3.4
4Ps	1	0.8	0	0	1	0.6
ACE Academy	0	0.0	1	2	1	0.6
Avon Natasha	1	0.8	0	0	1	0.6
Barangay	1	0.8	0	0	1	0.6
DTI & GOVT	1	0.8	0	0	1	0.6
Dungganon	1	0.8	0	0	1	0.6
Frontrow	1	0.8	0	0	1	0.6
IDUCO	1	0.8	0	0	1	0.6
Local organization	1	0.8	0	0	1	0.6
RBB	1	0.8	0	0	1	0.6
Rose Pharmacy	1	0.8	0	0	1	0.6
School	0	0.0	1	2	1	0.6
TESDA	2	1.6	0	0	2	1.1
Women's	1	0.8	0	0	1	0.6
CFCA organization	1	15.6	0	0	1	0.6
Others	19	0.8	0	0	19	10.9
None	84	68.9	49	94.2	133	76.4
Total	122	100.0	52	100.0	174	100.0
No. of hours of training attended						
0.5 to 4	**18**	**14.8**	**0**	**0.0**	**18**	**10.3**
4.1 to 8	1	0.8	0	0.0	1	0.6
8.1 to 24	9	7.4	1	1.9	10	5.7
Above 24	10	8.2	2	3.8	12	6.9
None	84	68.9	49	94.2	133	76.4
Total	122	100.0	52	100.0	174	100.0

Training Fee paid						
500	1	0.8	0	0.0	1	0.6
600	1	0.8	0	0.0	1	0.6
Free	**36**	**29.5**	**3**	**5.8**	**39**	**22.4**
None	84	68.9	49	94.2	133	76.4
Total	122	100.0	52	100.0	174	100.0
Training platform						
Onsite	**35**	**28.7**	**3**	**5.8**	**38**	**21.8**
Online	2	1.6	0	0.0	2	1.1
Webinar	1	0.8	0	0.0	1	0.6
None	84	68.9	49	94.2	133	76.4
Total	122	100.0	52	100.0	174	100.0

6.3 Level of awareness and satisfaction on MFI services

Respondents were asked to rate their level of awareness and satisfaction of the services that the MFI they are a part of was offering. Responses are found in Table 3.

Table 3. Level of awareness and satisfaction of MFI trainings to clients in select Philippine areas (n=122)

Level of Awareness on MFI Programs	Freq	%	Reasons
Not aware	19	15.6	Benefits; programs; No problem at all; Not informed
Slightly	23	18.9	Active organization; Programs; No problem at all; Undecided; COVIID
Somewhat	**35**	**28.7**	Benefits; Active organization; Finances; Undecided; No problem at all; Programs; Not informed; Time availability
Moderately	**22**	**18.0**	Benefits; Active organization; Finances; Undecided; No problem at all; Programs; Not informed
Extremely	**23**	**18.9**	Benefits, active organization; finances; no problem at all; Not informed
Total	122	100	
Level of Satisfaction			
Not satisfied	22	18.0	Haven't tried; Need more training; Clients satisfaction
Slightly satisfied	20	16.4	Haven't tried; Benefits; Need more training; Clients Satisfaction
Neutral	**36**	**29.5**	Haven't tried; No problem at all; Benefits; Need more training; Clients satisfaction
Very satisfied	**19**	**15.6**	Haven't tried; Active; No problem at all; Need more training; Clients satisfaction
Extremely satisfied	**25**	**20.5**	Haven't tried; No problem at all; Benefits; Clients satisfaction

Level of awareness. Most of the clients' awareness level about the MFI training ranged from somewhat (28.7%) to extremely aware (18.9%). MFIs should strive to increase awareness of their clients as more than a quarter of those identified MFI clients interviewed had low awareness about MFI training.

Reasons for respondents who were not aware (15.6%) includes; a) some of the clients were not aware of the benefits offered by the MFI; b) undecided for they have forgotten whether they have participated in the training before; c) some were having no problem whether they can attend the training since MFI could offer another schedule of training, and d) some were not informed of any of the training conducted..

Level of satisfaction. Most of the MFI clients' satisfaction ranged from neutral (29.5%) to extremely satisfied (20.5%). The challenge for MFI remains similar to that of the level of awareness, where there are still some clients that had low satisfaction with MFI training. The reasons for not satisfied clients (18%) were: a) they haven't tried attending any training services from the MFI; however, b) some were having no problem at all in their satisfaction level; and some clients were not satisfied with the overall management.

6.4 Source of information for business

Details on where respondents' get their information can be found on Table 4.

Table 4.1 Source of information for business of microentrepreneur respondents (MFI client and non- MFI client) in select Philippine areas (n=174)

Source of Information	Client		Non-client		Total	
	Freq	%	freq	%	freq	%
Family member or relatives						
Not used	2	1.1	2	1.1	4	2.3
Least used	4	2.3	3	1.7	7	4.0
Rarely used	7	4.0	8	4.6	15	8.6
Sometimes	18	10.3	11	6.3	29	16.7
Often used	26	14.9	6	3.4	32	18.4
Most used	65	37.4	22	12.6	87	50.0
Total	122	70.1	52	29.9	174	100.0
Internet and social media						
Not used	16	9.2	1	0.6	17	9.8
Least used	16	9.2	1	0.6	17	9.8
Rarely used	12	6.9	4	2.3	16	9.2
Sometimes	22	12.6	8	4.6	30	17.2
Often used	24	13.8	14	8.0	38	21.8
Most used	32	18.4	24	13.8	56	32.2
Total	122	70.1	52	29.9	174	100.0
Others with same business						
Not used	8	4.6	1	0.6	9	5.2
Least used	12	6.9	4	2.3	16	9.2
Rarely used	18	10.3	6	3.4	24	13.8
Sometimes	20	11.5	12	6.9	32	18.4
Often used	29	16.7	14	8.0	43	24.7
Most used	35	20.1	15	8.6	50	28.7
Total	122	70.1	52	29.9	174	100.0
Formal private training institutions						
Not used	37	21.3	5	2.9	42	24.1
Least used	17	9.8	17	9.8	34	19.5
Rarely used	13	7.5	7	4.0	20	11.5
Sometimes	18	10.3	11	6.3	29	16.7
Often used	18	10.3	5	2.9	23	13.2

Table 4. Summary of most used source of business information of

microentrepreneurs (RAFI client and non- RAFI client) in select Philippine areas (n=174)

Source of Information	Client		Non-client		
	Frequency	%		Frequency	%
Family member or relatives			**Internet and social media**		
Most used	65	37.4	Most used	24	13.8
School			**Family member or relatives**		
Most used	52	29.9	Most used	22	12.6
Traditional media (TV, radio, books, magazines)			**Formal private training institutions**		
Most used	49	28.2	Least used	17	9.8
Formal government training institution (e.g., TESDA)			**Others with same business**		
Not used	38	21.8	Most used	15	8.6
Others with same business			**Traditional media (TV, radio, books, magazines)**		
Most used	35	20.1	Most used	15	8.6
Internet and social media			**School**		
Most used	32	18.4	Most used	15	8.6
Groups or organizations with the business			**Formal government training institution**		
Not used	26	14.9	Least used	14	8.0
Formal private training institutions			**Groups or organizations with the business**		
Most used	19	10.9	Sometimes	13	7.5

Over-all, family members, school, and traditional media are the most commonly used business information sources for the MFI clients. In contrast, internet and social media, family members, and private training institutions are most commonly used by non-MFI clients. It appears that regardless of

being a client or non-client of MFI, family members are key sources of information. MFI clients also appear to be more traditional with their sources, while non-MFI clients incline online platforms.

6.5 Probable budget and reasons that microentrepreneur would be willing to pay.

The probable budget below 200 pesos (39.7%) is the amount that most MFI clients and non-MFI clients would be willing to pay (Table 5). Most of the clients found it affordable; however, some of the clients indicated the financial problems due to low income and crisis were the primary reasons caused by the pandemic.

On the other hand, unwillingness (36.8%) to pay got the second-highest average and most of them preferred free training since they were unemployed. This suggests that Covid-19 is not only a global pandemic or a public-health emergency, but it also has a significant impact on the global economy and financial markets, resulting in job losses and the failure of small businesses. Additionally, Covid-19 increased the number of unemployed people, impoverishing them and stopping them from taking advantage of various opportunities (Mogaji, 2020).

Table 5 Probable budget that microentrepreneurs would be willing to pay (MFI client and non- MFI client) for the trainings in select Philippine areas (n=174)

Probable Budget	Client			Non-client			Total	
	freq	%	Reason	freq	%	Reason	freq	%
Not willing to pay	**44**	**25.3**	crisis; no time; unaffordable; inexperienced; no idea; no reason at all; due to online seminar; not interested; cost payable; have balance to pay; hoping for free; undecided;	**20**	**11.5**	crisis; low income; prefer free trainings	64	36.8
Below 200 pesos	**47**	**27.0**	crisis; budget affordable; no reason at all; avoid borrowing big amount; for membership advantages;	**22**	**12.6**	financial problem; low income; affordable; crisis	69	39.7
201-400 pesos	15	8.6	budget affordable; with share savings; cost payable; hoping for free and accessible meeting venue;avoid borrowing big amount; no reason at all	6	3.4	good investment; low income; budget friendly; no reason at all	21	12.1
401-600 pesos	15	8.6	crisis; budget affordable; cost payable; for more benefits; no reason at all	1	0.6	no time; affordable; financial problem	16	9.2
601-800 pesos	0	0.0		1	0.6	affordable	1	0.6
801-1,000 pesos	1	0.6	for income generating; affordable	2	1.1	more effective; no reason at all	3	1.7
1,001-1,200 pesos	0	0.0		0	0.0		0	0.0
Above 1,201 pesos	0	0.0		0	0.0		0	0.0
Total	122	70.1		52	29.9		174	100.0

Probable Budget	Client			Non-client			Total	
	freq	%	Reason	freq	%	Reason	freq	%
Not willing to pay	**44**	**25.3**	crisis; no time; unaffordable; inexperienced; no idea; no reason at all; due to online seminar; not interested; cost payable; have balance to pay; hoping for free; undecided;	**20**	**11.5**	crisis; low income; prefer free trainings	64	36.8
Below 200 pesos	**47**	**27.0**	crisis; budget affordable; no reason at all; avoid borrowing big amount; for membership advantages;	**22**	**12.6**	financial problem; low income; affordable; crisis	69	39.7
201-400 pesos	15	8.6	budget affordable; with share savings; cost payable; hoping for free and accessible meeting venue;avoid borrowing big amount; no reason at all	6	3.4	good investment; low income; budget friendly; no reason at all	21	12.1
401-600 pesos	15	8.6	crisis; budget affordable; cost payable; for more benefits; no reason at all	1	0.6	no time; affordable; financial problem	16	9.2
601-800 pesos	0	0.0		1	0.6	affordable	1	0.6
801-1,000 pesos	1	0.6	for income generating; affordable	2	1.1	more effective; no reason at all	3	1.7
1,001-1,200 pesos	0	0.0		0	0.0		0	0.0
Above 1,201 pesos	0	0.0		0	0.0		0	0.0
Total	122	70.1		52	29.9		174	100.0

6.6 Training with interest to attend.

The general business-related trainings that the respondents were interested to attend are found on Table 6.

Table 6. General business related trainings that are of interest to microentrepreneurs (MFI client and non- MFI client) in select Philippine areas (n=174)

Training	Client		Non-client		Total	
	Freq	%	freq	%	freq	%
Financial Literacy	**92**	**52.9**	**25**	**14.4**	**117**	**67.2**
Intro to digitalization	60	34.5	8	4.6	68	39.1
Personal development and values formation	79	45.4	9	5.2	88	50.6
Business registration	76	43.7	12	6.9	88	50.6
Project planning	74	42.5	7	4.0	81	46.6
Digital literacy	47	27.0	10	5.7	57	32.8
Guide in business mastery	73	42.0	15	8.6	88	50.6
E-commerce	54	31.0	8	4.6	62	35.6
Food production-longers courses	**86**	**49.4**	**15**	**8.6**	**101**	**58.0**
Creative thinking skills program	75	43.1	12	6.9	87	50.0
Product development	69	39.7	13	7.5	82	47.1
Business Start-up	**81**	**46.6**	**19**	**10.9**	**100**	**57.5**
Management Leadership	68	39.1	14	8.0	82	47.1
Growth-oriented Program	68	39.1	9	5.2	77	44.3
Communication	74	42.5	13	7.5	87	50.0

Financial literacy (67.2%) had the highest percentage for both MFI clients and non-MFI clients among all business-related training mentioned. The majority of respondents expressed interest in this training as they lack trust in handling money and have difficulty managing their profits. Providing training could benefit micro-entrepreneurs to better understand and become financially literate in their business since individuals with an insufficient financial literacy degree cannot make sound financial decisions (Naidu, 2017).

Food production-longer courses (58.0%) got the second rank for both MFI clients and non MFI clients. The results show that the respondents would like to be involved in this kind of training as they thought it would be useful, especially in the foodservice industry.

Business start-ups (57.5%) ranked third in business-related training as they found it essential in building and handling their business. Since most of them are about to launch or have recently begun operating a microbusiness, arming themselves with basic business knowledge and the opportunity to start their company well and improve the probability of success is important.

6.7 Sustainable Livelihood Training

Meanwhile, information on Sustainable Livelihood Trainings that are of interest to the micro-entrepreneurs are found on Table 7.

Table 7. Sustainable livelihood trainings that are of interest to microentrepreneurs (MFI client and non- MFI client) in select Philippine areas (n=174)

Trainings	Client		Non-client		Total		
	freq	%	freq	%	Freq	%	
Trading, Merchandising, Buy and Sell							
Product Quality Planning	**86**	**49.4**	**34**	**19.5**	**120**	**69.0**	
Ambulant Food Vending	69	39.7	6	3.4	75	43.1	
Street Food Safety	72	41.4	16	9.2	88	50.6	
Online Marketing	61	35.1	27	15.5	88	50.6	
Basic Corporate Compliance					63		6.2
Food Business/ Food Vending							
Safe Food Handling	**83**	**47.7**	**40**	**23.0**	**123**	**70.7**	
Food Waste Management	74	42.5	22	12.6	96	55.2	
Meat Processing	71	40.8	15	8.6	86	49.4	
Menu Planning	75	43.1	17	9.8	92	52.9	
Recipe Costing	62	35.6	13	7.5	75	43.1	
Agriculture							
Urban Gardening	**65**	**37.4**	**41**	**23.6**	**106**	**60.9**	
Farming Technologies	53	30.5	17	9.8	70	40.2	
Vermicompost Production	42	24.1	5	2.9	47	27.0	
Pest Management	42	24.1	9	5.2	51	29.3	
Clay Pottery	38	21.8	7	4.0	45	25.9	
Fisheries and Aquatics							
Bangus Deboning	57	32.8	33	19.0	90	51.7	
Fish Processing Technologies	53	30.5	17	9.8	70	40.2	
Fish Kill Investigation	33	19.0	5	2.9	38	21.8	
Fish Habitat Restoration	37	21.3	9	5.2	46	26.4	
Marine Fish Hatchery	**30**	**17.2**	**5**	**2.9**	**35**	**20.1**	

Visual Graphic Design	33	19.0	13	7.5	46	26.4
Services						
Nail Art	52	29.9	30	17.2	82	47.1
Ventosa Massage Therapy	50	28.7	6	3.4	56	32.2
Personal Services Health and Safety Management	63	36.2	18	10.3	81	46.6
Defensive Driving Training	38	21.8	10	5.7	48	27.6
Basic Electrical Training	36	20.7	8	4.6	44	25.3
Other trainings that they are interested to attend						
Communication and Business Marketing	1	0.6	1	0.6	2	1.1
Rice Planting	1	0.6	0	0.0	1	0.6
Baking and Pastries	0	0.0	2	1.1	2	1.1
Basketball	0	0.0	1	0.6	1	0.6
Cosmetology	2	1.1	1	0.6	3	1.7
Caregiving course	1	0.6	0	0.0	1	0.6
Anything helpful	1	0.6	0	0.0	1	0.6
Cooking	1	0.6	0	0.0	1	0.6
Handcrafts	1	0.6	1	0.6	2	1.1
Dressmaking	1	0.6	0	0.0	1	0.6
Food Business Trainings	2	1.1	1	0.6	3	1.7
Digital literacy	1	0.6	0	0.0	1	0.6
Safety Training	0	0.0	1	0.6	1	0.6
Painting	1	0.6	0	0.0	1	0.6
Livestock and Poultry	2	1.1	0	0.0	2	1.1
Business management	1	0.6	0	0.0	1	0.6

The majority of the respondents generally showed interest in Safe Food Handling (70.7%) among other food business-related training. Both MFI clients and non-MFI clients found it significant because most of them belong to the food business industry. On the other hand, product quality planning (69.0%) ranked second on livelihood training. It indicates that both MFI clients and non-MFI clients were interested in attending this kind of training to learn about the different procedures and techniques used to develop their products. Meanwhile urban gardening (60.9%) ranked third for both MFI clients and non-MFI clients. Most of the respondents were interested in this training to acquire urban gardening and sustainability skills.

6.8 Preference on time duration, schedule, and frequency of trainings Table 8 shows

the respondents' preferences in the conduct of trainings.

Table 8. Time preference, schedule and training frequency of microentrepreneurs (MFI client and non- MFI client) in select Philippine areas (n=174)

Parameters	Client		Non-client		Total	
	freq	%	freq	%	Freq	%
Time Duration						
Cannot make time	9	5.2	7	4.0	16	9.2
1-2 hours only	55	31.6	26	14.9	81	46.6
Half-day	31	17.8	11	6.3	42	24.1
Whole day	17	9.8	7	4.0	23	13.2
Others						
2-3 hours	5	2.9	0	0.0	5	2.9
Depends on MFI	1	0.6	1	0.6	2	1.1
30 minutes	1	0.6	0	0.0	1	0.6
4 hours	2	1.1	0	0.0	2	1.1
Depends on my availability	1	0.6	0	0.0	1	0.6
Training Schedule						
Weekday (Mon-Fri) morning	17	9.8	10	5.7	27	15.5
Weekday (Mon-Fri) afternoon	10	5.7	4	2.3	14	8.0
Weekend (Sat/Sun) morning	38	21.8	15	8.6	53	30.5
Weekend (Sat/Sun) afternoon	44	25.3	18	10.3	62	35.6
Others						
Depends on the Schedule	3	1.7	1	0.0	4	2.3
No Time/ Busy for Work	1	0.6	2	1.7	3	1.7
Unavailable	1	0.6	0	0.0	1	0.6
Undecided	2	1.1	0	0.0	2	1.1
Training Frequency						
Once every two weeks	12	6.9	13	7.5	25	14.4
Once a week	66	37.9	28	16.1	94	54.0
2-3 times a week	31	17.8	9	5.2	40	23.0
Others						
Weekdays	2	1.1	0	0.0	2	1.1
No time	1	0.6	0	0.0	1	0.6
Depends on the schedule	2	1.1	0	0.0	2	1.1
Once a month	3	1.7	0	0.0	3	1.7
Prefer not to say	1	0.6	1	0.6	2	1.1
Weekend	1	0.6	0	0.0	1	0.6

Most MFI and non-MFI clients were willing to allocate 1-2 hours (46.6%) for the training. At the same time, other respondents were willing to give half-day (24.1%) for business-related training since some were busy with their responsibilities and priorities. Moreover, the majority of them generally want to attend training once a week (54.0%) during weekends (Saturday/Sunday) afternoons (35.6%). The schedule and frequency should be relevant to the target group the training provider wants to reach (Hamby, n.d.).

6.9 Preference on training set-up, venue and learning method time, schedule and frequency.

Other training set-up preferences can be found on Table 9.

Table 9. Preference on training set-up, venue and learning method time, schedule and frequency of microentrepreneur (MFI client and non- MFI client) in select Philippine areas (n=174)

Parameters	Client		Non-client		Total	
	freq	%	freq	%	freq	%
Training set-up						
On-site/Face-to-face	**77**	**44.3**	**20**	**11.5**	**97**	**55.7**
Facebook learning hub	19	10.9	13	7.5	32	18.4
Website	15	8.6	11	6.3	26	14.9
Webinars	14	8.0	9	5.2	23	13.2
Mobile Applications	19	10.9	13	7.5	32	18.4
Radio shows	24	13.8	7	4.0	31	17.8
Printed materials	39	22.4	15	8.6	54	31.0
On-site Training Preferred Venue						
In the center or the barangay	84	48.3	24	13.8	108	62.1
In the branch	23	13.2	5	2.9	28	16.1
In a private venue (conference rooms, hotels, etc.)	11	6.3	15	8.6	26	14.9
Others						
house	3	1.7	3	1.7	6	3.4
Depends on MFI	1	0.6	5	2.9	6	3.4
Total	122	70.1	52	29.9	174	100.0
Online learning preferred Method						
Synchronous learning	27	15.5	19	10.9	46	26.4
Asynchronous learning	74	42.5	14	8.0	88	50.6
Any	15	8.6	19	10.9	34	19.5
Prefer not to say	6	3.4	0	0.0	6	3.4
Total	122	70.1	52	29.9	174	100.0

The majority of the respondents preferred an on-site/face-to-face training set-up (55.7%) where they can interact with one another. Participants learn better when the content is actual and essential. They can engage actively in a hands-on, collaborative, and brain-compatible environment (Barkley et al., 2001). However, Webinar (19.0%) training set-up got the lowest vote since most respondents are not online.

Both MFI clients (48.3%) and non-MFI clients (13.8%) preferred to conduct the training in the center or the barangay rather than other venues. Thus, conducting the training in the center or barangay benefits the participants in spending less on transportation and other expenses and saves time traveling for hours. Spending money, hotels, and purpose-built conference and exhibition

centers are no longer the only places to host business events (Nolan, 2020).

Majority of the MFI clients and non-MFI clients preferred asynchronous learning (50.6%) as their learning method to manage their time since most of the clients are employed and busy with their business. In comparison, some of the respondents chose the synchronous learning method (26.6%) because they can learn, engage in training, and interact virtually to understand better. Online learning might include other techniques to improve knowledge (Barkely et al., 2001). Moreover, good training and learning experience, the right combination of technology, face-to-face coaching, and techniques must be considered (Yelon, 2006).

6.10 Gadget usage, internet access and platforms

The majority of the respondents used gadgets (89.7%). Such gadgets include smartphones/android (78.2%); traditional phone/keypad (24.7%); and some borrowed from others (9.2%). Due to the financial incapability and technology illiteracy of some respondents, they end up borrowing gadgets.

On the other hand, most MFI clients and non-MFI clients do not have regular access to the internet (51.7%) due to: financial reasons (19.5%), signals could not reach (30.1%) since they lived in rural areas. With this, it is clear that respondents from rural areas may not fully participate in the evolving information economy unless they have access to advanced telecommunications technology and services. Compared to urban areas, there are persistent and increasing gaps in data infrastructure quality (Salemink et al., 2017).

Facebook Messenger (51.7%) ranked first as the most used online platform for MFI clients and non-MFI clients; Facebook (48.3%) ranked second since most of them had access to the internet. They used Facebook and Messenger to promote their business, gain more consumers through online platforms, and attract more sales. Aside from using media as a way of communication, it is also one way to boost sales efficiency (Moore et al., 2015).

Table 10 shows the access and experience of respondents to gadgets, internet, and potential training platforms.

Table 10. Gadget usage, internet access and platforms of microentrepreneurs (MFI client and non-MFI client) in select Philippine areas (n=174)

Parameters	Frequency	%	Frequency	%	Frequency	%

Laptop	7	4.0	11	6.3	18	10.3
Netbook	2	1.1	2	1.1	4	2.3
Desktop Computer	3	1.7	6	3.4	9	5.2
Borrow from others	15	8.6	1	0.6	16	9.2
Others	0	0.0	0	0.0	0	0.0
Internet Accessibility						
Yes	53	30.5	31	17.8	84	48.3
No	69	39.7	21	12.1	90	51.7
Total	122	70.1	52	29.9	174	100.0
If no, why?						
Signal can't reach	41	23.6	13	7.5	54	31.0
Financial reason	26	14.9	8	4.6	34	19.5
Defective gadget	9	5.2	3	1.7	12	6.9
Don't know how to use	15	8.6	0	0.0	15	8.6
Others	1	0.6	0	0.0	1	0.6
Online Platforms Usage						
Facebook	**47**	**9.8**	**37**	**21.3**	**84**	**48.3**
Facebook messenger	**52**	**29.9**	**38**	**21.8**	**90**	**51.7**
Zoom	6	3.4	7	4.0	13	7.5
Skype	8	4.6	5	2.9	13	7.5
Microsoft teams	6	3.4	7	4.0	13	7.5
Twitter	3	1.7	5	2.9	8	4.6
Google meet	13	7.5	8	4.6	21	12.1
Member of MFI Facebook group						
Yes	1	0.6	0	0.0	1	0.6
No	**114**	**65.5**	**52**	**29.9**	**166**	**95.4**
no answer	7	4.0	0	0.0	7	4.0
Total	122	70.1	52	29.9	174	100.0

Frequency of facebook usage						
Everyday	**57**	**32.8**	**43**	**24.7**	**100**	**57.5**
2-3 times a week	14	8.0	4	2.3	18	10.3
Once every two weeks	13	7.5	0	0.0	13	7.5
Not sure	38	21.8	5	2.9	43	24.7
Total	122	70.1	52	29.9	174	100.0

6.11 Relevant perceptions and reasons on business-related trainings

Respondents were asked to share their perceptions on their attendance to business related trainings. Answers can be found on Table 11.

Table 11. Relevant perceptions and reasons on business related trainings of microentrepreneurs (MFI client and non- MFI client) in select Philippine areas (n=174)

Perception	Client		Non-Client		Total	
	Freq	%	Freq	%	Freq	%
1. I need training to improve my business.						
Highly Disagree	5	2.9	0	0.0	5	2.9
Disagree	5	2.9	4	2.3	9	5.2
Agree	43	24.7	7	4.0	50	28.7
Highly Agree	**69**	**39.7**	**41**	**23.6**	**110**	**63.2**
Total	122	70.1	52	29.9	174	100.0
2. I am confident with my knowledge on how to manage my business.						
Highly Disagree	5	2.9	5	2.9	10	5.7
Disagree	19	10.9	6	3.4	25	14.4
Agree	**63**	**36.2**	**24**	**13.8**	**87**	**50.0**
Highly Agree	35	20.1	17	9.8	52	29.9
Total	122	70.1	52	29.9	174	100.0
3. I am aware of the trainings conducted by MFI.						
Highly Disagree	8	4.6	**31**	**17.8**	39	22.4
Disagree	20	11.5	9	5.2	29	16.7
Agree	**57**	**32.8**	7	4.0	64	36.8
Highly Agree	37	21.3	5	2.9	42	24.1
Total	122	70.1	52	29.9	174	100.0
4. I am willing to learn new online platforms to avail of the trainings related to my business.						
Highly Disagree	12	6.9	3	1.7	15	8.6
Disagree	19	10.9	6	3.4	25	14.4

Agree	47	27.0	10	5.7	57	32.8
Highly Agree	**44**	**25.3**	**33**	**19.0**	**77**	**44.3**
Total	122	70.1	52	29.9	174	100.0
5. I can allocate regular time to attend business-related training.						
Highly Disagree	7	4.0	13	7.5	20	11.5
Disagree	17	9.8	16	9.2	33	19.0
Agree	**60**	**34.5**	**16**	**9.2**	**76**	**43.7**
Highly Agree	38	21.8	7	4.0	45	25.9
Total	122	70.1	52	29.9	174	100.0
6. I am too busy with my business that I cannot attend training anymore.						
Highly Disagree	26	14.9	13	7.5	39	22.4
Disagree	**59**	**33.9**	**16**	**9.2**	**75**	**43.1**
Agree	27	15.5	16	9.2	43	24.7
Highly Agree	10	5.7	7	4.0	17	9.8
Total	122	70.1	52	29.9	174	100.0
7. I am willing to avail the paid training conducted by MFI.						
Highly Disagree	10	5.7	**16**	**9.2**	26	14.9
Disagree	21	12.1	11	6.3	32	18.4
Agree	**55**	**31.6**	15	8.6	70	40.2
Highly Agree	36	20.7	10	5.7	46	26.4
Total	122	70.1	52	29.9	174	100.0
8. I am satisfied with the training conducted by MFI to its members.						
Highly Disagree	8	4.6	**23**	**13.2**	31	17.8
Disagree	17	9.8	13	7.5	30	17.2
Agree	**50**	**28.7**	9	5.2	59	33.9
Highly Agree	47	27.0	7	4.0	54	31.0
Total	122	70.1	52	29.9	174	100.0

Need for training for business improvement. The majority of the MFI clients and non-MFI clients highly agreed (63.2%) that training is a vital component of running an effective business.

Confidence in knowledge to manage business. Half of the MFI clients and non-MFI clients agreed (50.0%) that they were confident enough to handle their own business. Some of them said that they still need the training to improve their management skills as a business owner.

Awareness of MFI training. Most of the MFI clients agreed (32.8%) that they were aware of MFI's training. Most MFI clients said that they gave their complete trust in MFI because it gives them hope in the

business world. However, non-MFI clients highly disagreed (17.8%) since they are not members and haven't tried any MFI training.

Willingness to learn new online business training platforms. Most of the MFI clients and non MFI clients highly agreed (44.3%) that they were willing to learn new online platforms to avail MFI training and learn various techniques to attract more customers.

Regular time allocation to attend business-related training. Most of the respondents agreed (43.7%) that they were willing to allocate time to attend business-related training to learn more about business management and develop their entrepreneurial skills.

Non-attendance training due to business concerns. MFI clients and non-MFI clients disagreed (43.1%) that they were busy and couldn't attend the training anymore. Some clients said that even if they have a hectic schedule, they're still willing to participate in the training because it's for their professional development.

Willingness to avail the paid training conducted by MFI. Most of the MFI clients agreed (31.6%) that they were willing to avail MFI's training because this organization is different. Many MFI clients said that MFI helped build their business, and no matter what, they will support MFI all the way. However, non-MFI clients highly disagreed (9.2%). They're not a member of MFI, but they are willing to be part of MFI if given a chance.

Satisfaction on training conducted by MFI to its members. Most of the respondents were satisfied (28.7%) with MFI's training. Some of them mentioned that the training helps them understand their responsibilities, knowledge, and skills needed to perform their job well.

Some non-clients highly disagreed (13.2%) since they have not tried or attended MFI's training, yet they still gave positive feedback and were interested in attending. Thus, learning capacity is a gift; learning ability is a skill; and willingness to learn is an option (Sottilare et al., 2017).

6.12 Possible Challenges on Training Set-up

Micro- entrepreneurs shared their concerns and potential challenges if trainings are done on-site or on- line. Responses are found on Table 12.

Table 12. Possible challenges of microentrepreneurs on on-site training set-up (MFI client and non- MFI client) in select Philippine areas (n=174)

Themes	Client		Themes	Non-Client	
	freq	%		freq	%
Onsite					
Covid-19 Pandemic	30	24.6	Covid-19 Pandemic	9	17.3
Lack of Resources	22	18.0	Transportation	5	9.6
Transportation	27	22.1	Lack of Resources	7	13.5
Lack of Time	18	14.8	Communication	4	7.7
Communication	10	8.2	Knowledegeable Trainors	4	7.7
Safety and Health Protocols	9	7.4	Training Not Aligned	4	7.7

Training Not Aligned	2	1.6	Lack of Time	16	30.8
Lack of Trust of Facilitators	1	0.8	Health issue	1	5.8
Health Issues	3	2.5	None	7	
Total	122	100.0	**Total**	57	107.7
Online					
Lack of Resources	20	16.4	Transportation	2	3.9
Lack of Time	11	9	Scammers	1	1.9
Safety and Health Protocols	1	0.82	Technology Utilization	1	1.9
Health Issues	4	3.3	Knowledgeable Trainers	1	1.9
Scammers	2	1.6	Communication	34	65.3
Technology Utilization	73	60	Lack of Resources	6	11.5
None	11	9	Lack of Time	5	9.6
			None	5	3.8
Total	122	100.12	**Total**	55	105.8

6.12.1 Possible Challenges on On-site Training Set-up

In terms of potential challenges if trainings will be done in an online set-up, respondents highlighted risks relating to health due to the COVID-19 pandemic. This is followed by cost-related concerns like for transportation, as well as the need for more time to be allocated when doing on site trainings.

6.12.2Possible Challenges on Online Training Set-up

Main challenges for both clients and non-clients were **technology-utilization, access to needed technology, time, and trustworthiness of training provider** especially as scammers abound.

6.13 Suggestions for the improvement of the MFI trainings

When asked for recommendations, micro-entrepreneurs provided suggestions for the improvement of the trainings provided by the MFIs as seen on Table 13.

Themes	Freq	%
Improve Management and Services	45	36.89
Weekend Training Schedule	5	4.10
Affordable Training	3	2.46
None	60	49.18
Satisfied with the trainings	17	13.93
Total	**130**	**106.6**

Management. The majority of the MFI clients suggested that MFI must improve its service to its members. Some of them said that MFI must provide adequate training to expand their knowledge on

handling their business and choose a teacher that is effective and efficient to them.

Affordable training. Some of the MFI clients partake in suggesting budget-friendly training. The pandemic affected their income (i.e., unemployed, business closure). Having affordable training sessions could help them save their dying business and luckily lift the unemployment rate in their area.

Weekend training schedule. MFI clients suggested that training should be done during weekends. Some clients preferred this schedule because of their time availability. During weekdays, some of the clients have work, class, and busy doing the household chores. Workshops held on weekends have the potential to be highly effective (Haskin, 2016).

6.14 Willingness to be become a MFI member and corresponding reasons

Respondents were asked about their willingness to continue or be a new member of an MFI to assess if interest in a learning institute would affect their decision. Table 14 shows their answer.

Table 14. Willingness to be become a MFI member (MFI client and non- MFI client) in select areas in the Philippines if a learning institute is to be established (n=174)

CLIENT				NON-CLIENT				TOTAL	
Level	**Freq**	**%**	**Reasons**	**Level**	**Freq**	**%**	**Reasons**	**Freq**	**%**
Lowest	4	**3.3**	Financial handling; Perspective view on training	Lowest	5	**9.6**	Not interested	9.0	5.2
Low	3	**2.5**	Gain more knowledge about business	Low	2	**3.8**	Financial handling	5.0	2.9
Moderate	20	**16.4**	Starter/Novice; Time; Gain more knowledge about business	Moderate	7	**13.5**	Gain more knowledge about business; Membership advantages	27.0	15.5
High	23	**18.9**	Gain more knowledge about business; Perspective view on training; Membership advantages	High	12	**23.1**	Gain more knowledge about business	35.0	20.1
Highest	69	**56.6**	Gain more knowledge about business; Good management	Highest	17	**32.7**	Gain more knowledge about business; Membership advantages	86.0	49.4
Prefer not to say	3	**2.45**		Prefer not to say	9	17.3			
Total	122	100.0		**Total**	52	100.		174	100.0

A relatively high number of MFI clients (75.4%) and more than the majority of the non-MFI clients (55.8%) have expressed at least a high willingness to become a member of MFI (Table 14). The following shows the reasons for this perspectives:

Good management. MFI members (3.3%) talk about MFI's good management, which makes it a full justification for becoming a part of the organization.
Membership Advantages. There were 18.9% of MFI clients while 46.2% non-clients indicated that they were willing to become MFI members due to the membership advantages. MFI clients were handled by a good manager and provided with various assistance. For non-clients, they observed certain services initiated by the organization that let them visualize successful businesses.

Perspective view on training. Non-clients (16.4%) raised their perspective to be a part of the MFI organization when they have seen many initiated training sessions that allow them to enhance their controlled business effectively. On the other hand, clients were either hesitant or interested in the offered training of MFI.

Financial handling. Majority of the clients (56.6%) rated financial handling as the lowest rate and (15.5%) of non-clients ranked it as inadequate. Clients complimented how well MFI organization handles financial affairs throughout its members while the non-clients are looking forward to it.

There were still some current MFI clients (5.7%) who expressed low willingness to become members. On the other hand, almost a fifth of the non-MFI clients (23.1%) had a low willingness to become MFI members (Table 14). The emerging reasons for these are that they are not interested, and they needed more knowledge and skills.

6.15 Summary of recommendations from microentrepreneurs for learning institute or training provider creation

Table 15 shows the overall summary of recommendations from the respondents.

Table 15. Summary of recommendations if a specific learning institute or training provider would be created for the microentrepreneurs (MFI client and non- MFI client) in select Philippine areas (n=174)

Themes	Client		Themes	Non-client	
	Freq	%		Freq	%
None	61	50	None	23	44.23
More training and seminars	29	23.8	Affordable training	11	21.2
Excellent Management	15	12.3	More training and seminars	10	13.5
Financing	7	5.7	Excellent Management	7	1.9
Colleague	4	3.3	Financing	3	5.8
Benefits	3	2.46	Online Platform	1	1.9
Online Platform	2	1.6			
Affordable training	1	0.82			
Total	122	99.98	**Total**	55	105.8

More training and seminars. Most MFI clients and non-clients indicated that they must have more opportunities in various training courses to help them prepare to be fully equipped to start a micro business. For clients, this was seen as the number one recommendation and number two for non-clients. It would be a tremendous initiative to appeal to their individual needs to offer a wide variety of training that focuses on one aspect.

On the other hand, many of them agreed that they do not yet have the confidence to handle their business, handling their financial management in particular. They are also interested in developing their financial literacy and how they can be successful in managing their income..

Benefits. From MFI client perspectives, most of them recommended having a scholarship, housing loan, insurance, and help those who need to start-up a small business. Providing them more benefits would most likely increase their participation and interest. Adding incentives can improve satisfaction, concentration, efficiency, engagement, and recruiting (Patriot, 2021).

Financing. MFI clients call for an increased capital amount with lower interest and additional load wallet budget. Clients and non-clients alike are impacted by a limited capital for their businesses (Chamber of Indian Micro Small and Medium Enterprises, 2021). Another raised concern is the high-interest rates (Economic Times Bureau, 2019). Some clients assumed they would be
receiving their exact loan amount because they did not know the insurance deduction rate. Clients needed knowledge and valuable instruction as their recommendation.

Affordable training. Clients and non-clients also appeal for an affordable training cost. This request was exacerbated by the Covid pandemic, which is still present.

Colleague. One of the client's recommendations includes inviting friends to attend the training. In doing so, many would be aware of the training program offered (Security, 2010). Furthermore, the more participants who engage in business training, the more entrepreneurial skills and knowledge they will gain for their businesses (Boukamcha, 2015).

Excellent management. Non-clients of MFI recommend receiving excellent management from MFI microfinance. It should also involve meeting their needs, particularly in business growth (Chironga et al., 2012). The non-clients also mentioned information dissemination, including rules and regulations and the benefits they would get.

Online platform. Some respondents (clients 1.6% and non-clients 1.9%) recommended an online training platform, indicating that they are willing to adapt this platform or its related networks.

6.16 Statistical analysis results of variables with significant association or correlation Results of The

statistical analysis done on the study's variables is found on Table 16. [Table 16]

Table 16. Statistical analyses results of variables with significant association or difference

Variables	P value
Pre-covid and post-covid income	< 0.001
Level of awareness	< 0.001
Level of satisfaction	< 0.001
Age * Clientship	< 0.001
Sex * clientship	0.015
Civil status*clientship	< 0.001
Educational attainment*clientship	< 0.001
DTI*clientship	0.008
Mayor's permit*clientship	0.003
BIR*clientship	0.007
Use of internet and social media*clientship	0.01
Formal private training institutions*clientship	0.01
Formal private training institutions*clientship	0.015
401-600 PHP *clientship	0.041
Financial literacy*clientship	0.001
Introduction to digitization*clientship	< 0.001
Personal development and values formation*clientship	< 0.001
Business registration*clientship	< 0.001
Project planning*clientship	< 0.001
Digital literacy*clientship	0.014
Guide in business mastery*clientship	< 0.001
E-commerce*clientship	< 0.001
Creative thinking skills*clientship	< 0.001
Product development*clientship	< 0.001
Business start-up*clientship	< 0.001
Management leadership*clientship	0.001
Growth oriented program*clientship	< 0.001
Communication*clientship	< 0.001
Ambulant food vending*clientship	< 0.001
Street food safety*clientship	0.001
Basic corporate compliance*clientship	< 0.001
Food waste management*clientship	0.031
Meat processing*clientship	< 0.001
Menu planning*clientship	< 0.001
Recipe costing*clientship	0.002
Urban gardening*clientship	0.002
Vermicompost production*clientship	0.001
Pest management*clientship	0.029

Clay pottery *clientship	0.015
Bangus deboning*clientship	0.048
Fish kill investigation*clientship	0.011
Marine fish hatchery*clientship	0.024
Beadworks*clientship	0.003
Clay crafting*clientship	0.029
Ventosa massage therapy*clientship	< 0.001
Personal health and safety management*clientship	0.047
Basic electrical training*clientship	0.05
Frequency of training*clientship	0.032
Facebook learning hub*clientship	0.006
Website training*clientship	0.033
Mobile applications training*clientship	0.03
Preferred training venue*clientship	< 0.001
Online learning preferred method*clientship	< 0.001
Use of mobile phone (android)*clientship	< 0.001
Use of tablet*clientship	0.022
Use of laptop*clientship	0.002
Use of desktop*clientship	0.022
Borrowing of gadget from others*clientship	0.03
Don't know how to use gadget*clientship	0.008
Online platform usage - facebook*clientship	< 0.001
Online platform usage - zoom*clientship	0.038
Online platform usage - facebook messenger*clientship	0.002
Frequency of log-in to Facebook*clientship	< 0.001
Need for trainings to improve business*clientship	0.008
Awareness to MFI trainings*clientship	< 0.001
Willingness to learn new online platforms*clientship	0.01
Allocation of regular time*clientship	0.038
Willingness to avail paid MFI trainings*clientship	0.001
Satisfaction to MFI trainings to its members*clientship	< 0.001

Pre-COVID and Post-COVID Income: A significant number of respondents experienced income decreases, especially below 10,000 PHP, likely due to the financial fragility of small businesses. The pandemic led to business closures, layoffs, and economic disruptions (Donthu & Gustafsson, 2020; Bartik et al., 2020).

Level of Awareness and Satisfaction: Most MFI clients show higher awareness and satisfaction with MFI training, supporting earlier findings. However, it can be reiterated that there were still clients who answered with low awareness and satisfaction levels, and MFI should strive to increase these levels.

Age, Sex, Civil Status, and Education: MFI clients tend to be older (31 and above), married, and have a high school or college-level education. Non-MFI clients are typically younger (30 and below), single, and

have at least a college-level education. This suggests MFI's potential strategy to target females aged 31 and above, married or with a live-in partner, and at least high school graduates.

DTI Registration, Mayor's Permit, and BIR Registration: Non-MFI clients are more inclined to register with government authorities, compared to MFI clients, posing a challenge for MFI to encourage legal business registration.

Source of Information for Business: Non-clients are more likely to use external knowledge sources, possibly due to higher education levels. They utilize various sources such as the internet, role models, or competitors.

Willingness to Pay for Training: Some MFI clients are willing to pay within the PHP 401-600 range for training, although most prefer lower amounts. Income levels may influence their willingness to invest in training.

Preferred Trainings: MFI clients are interested in a range of trainings including financial literacy, digitization, personal development, and values formation, while non-clients focus on digital literacy.

Sustainable Trainings: MFI clients are interested in topics like food vending and safety, while non-clients lean towards urban gardening.

Preferred Frequency of Training: MFI clients prefer weekly to bi-weekly sessions, typically not exceeding half a day, and conducted on weekends.

Training Setup: Both clients and non-clients prefer on-site training, but non-clients also express interest in online platforms.

Preferred Venue for Onsite Training: MFI clients favor center or branch locations, while non clients prefer private venues.

Preferred Method for Online Learning: MFI clients prefer asynchronous learning, while non clients accept both synchronous and asynchronous modes.

Gadget Use: MFI clients tend to borrow gadgets and may be less tech-savvy, whereas non clients commonly use mobile phones, tablets, laptops, and desktop computers.

Frequency of Facebook Usage: Non-clients log in more frequently to Facebook, likely due to their younger age group.

Need for Training to Improve Business: Non-clients are more motivated to improve their businesses through training.

Willingness to Learn New Online Platforms: Both groups are willing, but non-clients, who are typically younger and more tech-savvy, express higher agreement.

Allocation of Time for Business-Related Training: MFI clients appear more willing to allocate regular time for training.

Willingness to Avail Paid MFI Trainings: MFI clients are more willing to participate in fee-based MFI training programs, likely due to their membership and prior experience.

These findings provide insights into the differences between MFI clients and non-clients, highlighting

opportunities for targeted training and support programs.Top of Form

6.17 Environmental scanning on training providers in the Philippines

Table 17 shows the details of services and trainings offered by other organizations to micro-entrepreneurs.

Table 17. Summary of services, training offered and training fees of select Philippine MFIs

MFIs/Training Provider	Services offered related to Microfinancing	Training Offered	Training Fee	Remarks
UPLift	Microloans	Livelihood Training		
	Capital Build Up (Saving Scheme) Emergency Health Care Program Micro-insurance Micro Loans	Financially Independent Training Program	Free for clients	Part of the sustainability development program of the MFI that thy offer free training to their clients
ASA Philippine Foundation	Micro Savings (CBU) Locked-in Capital Build Up (Force Savings)	*-No accessible information-*	*-No accessible information-*	
Ahon Sa HIrap Inc.	Loans Savings Insurance	Business Development Financial Literacy Business Management Training	Free for clients (MFI's ensure that their clients are equipped with necessary skills	

KASAPI Microfinance & Rural Development Inc.	-Pangkabuhayan Individual Loan Program - Pangkabuhayan Group Loan Program - Micro Agricultural Loan -Rice Consumption loan	Livelihood Training Program	Free for clients	Clients were given free training.
Bayan EDGE	-micro loans	-Entrepreneurial & Technical Training Program -Enterprise Assessment	Free	Bayan EDGE is the seed of the ABS-CBN Foundation Inc.
Cordillera Community Microfinance	-Agricultural Loan -Multi-purpose Loan - Micro-enterprise Loan	-Livelihood & Enterprise Development - Social Protection -Education, Training & Formation	Free	MFi partnered with Child Fund Philippines who support poor families in Cordillera & nearby Provinces
CIT-U	Provide skills training for the future microentrepreneurs through their community extension program	Skills training and product marketing	No specific cost for training for it may vary depending on the venue and type of training but for the participants can attend for free	Training fee is free as it is subsidized by the University as part of their corporate social responsibility

CTU-TBI	Organize the a community for possible business start up through community extension program	Skills training and product marketing, management and financial literacy	No specific cost of training whatever training offered to the community as it is part of the whole community extension as designed by the project leader	Training is free and subsidized by the government and every community extension project if GAA funded
DOLE	Livelihood Training program through other agencies like state universities	Livelihood training	No specific training fee	Training is free and subsidized by the government and every community extension project if GAA funded
DOST	Livelihood Training program through other agencies like state universities	Livelihood training	No specific training fee	Training is free and subsidized by the government and every community extension project if GAA funded
DTI	Livelihood Training program through other agencies like state universities	Livelihood training	No specific training fee	Training is free and subsidized by the government and every community extension project if GAA funded
USC	CIT-U	Provide skills training for the future microentrepreneurs through their community extension program	Skills training and product marketing	No specific cost for training for it may vary depending on the venue and type of training but for the participants can attend for free
AMPC	Microfinancing Loan	Membership, management training	Cost per training vary depending upon the venue and the type of training but offered Free for the member	Training is free to encourage more members to engage more financial services in a form of loan
BCS	Microfinancing Loan	Membership, management training	Cost per training vary depending upon the venue and the type of training but offered Free for the member	Training is free to encourage more members to engage more financial services in a form of loan

FICCO	Microfinancing Loan	Membership, management training	Cost per training vary depending upon the venue and the type of training but offered Free for the member	Training is free to encourage more members to engage more financial services in a form of loan
KB	Microfinancing Loan	Membership, management training	Cost per training vary depending upon the venue and the type of training but offered Free for the member	Training is free to encourage more members to engage more financial services in a form of loan
LTMPC	Microfinancing Loan	Membership, management training	Cost per training vary depending upon the venue and the type of training but offered Free for the member	Training is free to encourage more members to engage more financial services in a form of loan
MWIMPC	Microfinancing Loan	Membership, management training	Cost per training vary depending upon the venue and the type of training but offered Free for the member	Training is free to encourage more members to engage more financial services in a form of loan
MASS-SPEC	Microfinancing Loan and business start up	Membership, management training	Cost per training vary depending upon the venue and the type of training but offered Free for the member	Training is free to encourage more members to engage more financial services in a form of loan

Different microfinance institutions in the Philippines have been established to uplift the economic condition of the people in our society. They existed for a common reason to help our underprivileged individuals, specifically the urban poor. Different institutions have different core groups

to focus on, for example the ASHI (Ahon Sa Hirap Inc.) predominantly helped women groups, the ARDCI helped farmers and fishermen and other institutions like ASA and UPLift focused on small-scale business retailers.

Most of the institutions provide different loan schemes ranging from P1,000 to P200,000 with a low interest rate with no deductions. Aside from that, they promote micro-savings service to support the low-income saving family in the future to address family emergencies. They also offered insurance benefits like the Emergency Health Care Program (UPLift) that pays the cost of a covered person's medical costs and some micro-insurance that covers accidents, injury or death.

For training, major institutions continually provide its members with a variety of training programmes, in terms of personal, social, spiritual and business development; financial literacy and business leadership training to ensure they are adequately equipped. Training providers are the future big competitors of MFI, especially in the Visayas region which is their direct and major competitor as most of their customers are situated in this region. Knowing and learning their best practices are very important for MFI as a new entrant in the market.

It was found that there are government agencies like DOST, DTI, DOLE are generous enough to give grants, seed capital and free business trainings, workshops, and seminars to MSMEs to flourish business ventures in the country to improve the economic condition of the community and the entire country as a whole.

There are no training fees from training providers as their business trainings are purely free part of their added service to their clients. Banks, cooperatives, lending, and other financial institutions are very profitable and successful in their businesses even though they did not offer business trainings, seminars and workshops to their clients as they offer attractive financial product offerings and render superior customer service to their clients. If they conduct business trainings they are all for free as their added service to their clients.In a very competitive financial world, financial institutions and organizations should continue to innovate creative financial product offerings and excellent customer service to compete well in the market and to keep their business going.

6.18 More critical insight

Catering to the general public is important, but non-MFI client participation should not be considered as the main sustainability driver of a potential learning institute establishment as MFI clients were the most likely to avail of the training services. Non-clients are inclined to avail only of the free trainings. Since clientship seems to influence the availment of training services, MFI must strive to increase the client base so more will avail of such services. With a strengthened membership, social enterprise and other programs can well be interjected.

6.19 Recommendations for Learning Institute

Entrepreneurial initiatives would help to spark economic development and raise living standards. Any state's economy relies heavily on small businesses. Hearing SMEs' voices and providing them with what they need is one way to succeed. Hence, the following recommendations are proposed based on the results gathered. These should be heard in strengthening the potential learning institute of MFI.

1. **Know the potential clients.** It can be strategic to recruit women aged 31 and up, married or have a live-in partner, and is at least a high school graduate, since they are most likely to sign up in the program.

2. **Offering a variety of training courses and workshops.** Specific training, including financial literacy, introduction to digitization, personal development and values formation, business registration, project planning, business mastery, E-commerce, creative thinking skills, product development, business start-up, management leadership, growth-oriented program, and communication, is recommended.

   Furthermore, since technology is so essential in performing this training, it would be helpful to teach participants how to use it since most of them expressed a lack of understanding of how to use various technical devices. Hence, increasing their technical literacy is essential, particularly now that we are using more of it.

3. **Provide sustainable training that best suits their interest.** Training such as ambulant food vending, street food safety, essential corporate compliance, food waste management, meat processing, menu planning, recipe costing, vermicompost production, pest management, clay pottery, bangus deboning, fish kill investigation, marine fish hatchery, beadworks, clay crafting, ventosa massage therapy, personal health and safety management, and basic electrical training are some of the training they are interested to learn with.

4. **Establishing a source of information or knowledge- base for business.** One way to help clients and prospective clients arm themselves with proper knowledge is to educate them about where to find credible sources of business intelligence.

5. **Set-up training details based on preference.** Training should be done once a week on the weekend for no longer than half a day. Training can be a mixture of both on-site in the center and online with pre-recordings, handouts, learning materials, or social media platform provided.

6. **Request a training session fee that is between Php 401 and 600, or less.** Obtaining reasonably priced instruction that does not surpass Php 401-600 or receiving it for free will be extremely helpful.

7. **Increase the number of members to expand the company network and make training more enjoyable.** As some clients have indicated, getting more participants in the program allows for peer learning and their business network extension.

8. **Partnership with schools**. MFI may opt to partner with schools as these were identified to be very good sources of information. Schools may also have programs that will be complementary to the programs of MFI.

9. **Establish a robust learning institute that is conducive to various training.** Clients and non-clients of MFI have expressed willingness to sustain or become a member of MFI if a learning institute is to be created. However, MFI must consider the following concerns, including conducting more relevant and affordable training and seminars, excellent management, financing support, information from peers and colleague, benefits, and
   usage of online platforms. Membership must be a priority though. The most likely attendees of paid trainings if give are MFI clients as non-members may be unwilling to pay.

10. **Increase the loan amount while keeping the interest rate low.** Securing a larger loan amount at a

reduced interest rate means finding more opportunities to establish a more significant business or open new doors. Clients also stressed that understanding the exact loan sum ahead of time would help them project the potential business they should start.

11. **Encourage members to register their business legally.** This ensures the safety of their business and establishes their credibility and trust among their clients.

12. **Establishing trust towards the client.** They are more concerned about whether the person they are negotiating with is a genuine article or a forgery. Thus, it's critical to earn their confidence and assure them that they're in safe hands.

7. Conclusion and Recommendations

7.1 Conclusion

A total of 174 respondents (MFI clients and non-MFI clients) participated in the study. Respondents were middle aged, married females with High School to college educational attainment.

Most of the respondents recognized the need for trainings to improve their respective businesses and are willing to learn new online platforms for their businesses. Respondents are also confident with their business management skills and are willing to allocate regular time for business-related trainings. However, MFI clients appear to be more aware and satisfied with the trainings that are conducted by MFI and are willing to pay to participate in MFI trainings than non
MFI clients. Although most of the clients showed awareness and satisfaction, a number of MFI clients appeared to have low awareness and satisfaction. MFI must utilize the online platforms and other means of disseminating training information to attain significant results. Hence, increasing the respondents' awareness and satisfying the foundation, the MFI clients, and the non-MFI clients.

Most of the respondents had no business-related training attended and did not specify the training provider. Very few MFI clients perceived that MFI was the training provider for the business-related training they attended. To further hone the respondents' expertise in their respective businesses, MFI must conduct adequate training based on the needs and concerns of the MFI clients and the non-MFI clients. Thus, encouraging potential MFI clients. On the other hand, for those who were able to participate, most of the trainings appeared to be free and were conducted on-site.

Most MFI clients preferred to use the center or the barangay for the on-site training, while non-MFI clients preferred private or other venues. For the preferred method for online learning, most MFI clients prefer asynchronous learning, while non-MFI clients prefer both synchronous and asynchronous modes. Both the MFI clients and non-MFI clients own a gadget, but MFI clients expressed their unfamiliarity in using various technological devices. Hence, family members or relatives were the most relevant information source for the MFI clients due to their limited proficiency in using gadgets and the internet.

However, the internet and social media appeared to be the most valuable source of information for non-MFI clients. To overcome this obstacle, MFI needs to organize training on the use of technological gadgets and the internet, especially for MFI clients. With the new normal, being proficient in the use of the internet and social media is essential. Meanwhile, most of the respondents are interested in attending financial literacy trainings and safe food handling. Since most of the respondents expressed their interest in these types of training, mobilizing a training
workshop will create positive change on how micro-entrepreneurs will efficiently manage their finances.

MFI clients appear to prefer once a week to 2-3 x a week, while non-clients –once every two weeks to once a week. Hence, if MFI were to schedule and conduct trainings to accommodate both the client and non-client, most prefer it to be once a week, not more than half a day, and on a weekend.

Meanwhile, training providers and organizations in the industry appear to have institutionalized learning and development programs that are geared towards providing continuous training, adapted models, and best practices.

Overall, respondents generally lacked business-related training, but are committed to learn and participate in trainings best suited for them and their respective businesses. Thus, MFI must focus on devising appropriate training while considering the respondents' limitations and capabilities. Consequently, increasing the economic value and social impact of their businesses and strengthening their capacity in managing their businesses simultaneously.

7.2 Recommendations

Based on the results of the study, recommendations for different stakeholders were identified.

First is for organizations that provide trainings for MSMEs such as government agencies and private organizations like MFIs. The study recommends that trainings be planned thoroughly based on the participants' needs and preferences as discussed in the results. This would ensure that the development activities will meet its objective of maximum utility and impact for MSMEs.

Additionally, MSMEs are recommended to provide feedback and input to the providing organization about the trainings they have attended. This would help in the creation of activities that are fit to what would be most useful for them. By ensuring that they give their comments and suggestions to the training providers, both can collaborate better so trainings are beneficial for both parties.

It is also vital that future researchers conduct more studies on the topic of creating learning institutes and providing trainings to micro, small, and medium entrepreneurs in the Philippines. As the business and training landscape develops along with the times, context on needs and preferences may change. Thus, constant updating of this research focus is important.

Other study focus could be more on the assessment of specific trainings that have initially followed the recommendations of this study and how these trainings and/or learning institute have affected their participants.

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Value Chain Analysis of the Business Ecosystem of Select Micro- and Small Enterprises in Cebu Province

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ABSTRACT

To provide well-rounded interventions for MSMEs, it is vital that organizations understand the overall process that their industries undergo from start to finish. Thus, this study aims to map and analyze the ecosystem value chain of micro- and small businesses in the Philippines, specifically under the Agriculture, Fishing, Food Processing, Arts and Crafts, and Livestock and Poultry industries. Its purpose is to assess the existing value chain of the businesses related to the production, logistics, and retail of different products, so insights can be used in identifying support that can be provided in strengthening the links in the chain of these businesses. The study utilized both quantitative and qualitative research in investigating the value chain of the above-mentioned industries in Cebu Province, Philippines. Surveys and key informant interviews were conducted among producers, wholesalers, and retailers in each of the identified industries. Results showed that each part of the value chain requires different forms of intervention. Various industries also have unique needs for support. Across all industries, however, actors are still seen to be traditional in managing their business, limiting their potential to maximize yield and/or output. Producers were found to be the most at risk of losses. They also have the highest consumer peso share and marketing profit among actors found in the value chain except for chayote farmers. Some actors do not consider labor costs in their expenses, making their marketing profits overestimated. By utilizing the results of the study, the distinctive reality of each value chain can be strengthened to ensure improvements across these MSME businesses.

Keywords: value chain, producers, business ecosystem

1. INTRODUCTION

Micro, small, and medium enterprises (MSMEs) prove that they are integral to the economy and

society by providing livelihood to groups in vulnerable situations like the poor, women, and/or troubled youths. A lot of Filipinos turned to MSMEs during the pandemic when they had problems with employment and income (Lauengco, 2023). More than half of the country's total employment is generated by MSMEs, and they account for 25% of the country's total export revenue (Department of Trade and Industry, 2022).

Several government programs are now in place to help MSMEs as they respond to new opportunities with the full implementation of the Regional Comprehensive Economic Partnership (RCEP) in the country. Globalization of MSMEs will be the key to achieving inclusive growth for any country, and the RCEP may give access to global value chains. This involves a number of tasks or processes which have been mostly occupied or done by multinational corporations in the form of international networks. This would provide a good opportunity for SMEs to participate in globalization (Urata, 2021).

The Free Trade Agreement will theoretically eliminate barriers and let MSMEs access potentially 2.3 billion new customers across countries. But there will be a need for further programs and policies to improve MSMEs' global connectivity (Urata, 2021) and access to solutions for their financial and non-financial challenges, like finance and capital, capacity-building opportunities, and relevant new technology (Lauengco, 2023).

MSMEs struggle with finding access to affordable financing sources for their businesses' additional capital. Formal lending institutions like commercial banks have higher interest rates and a lot of documentary requirements, which makes them unapproachable for MSMEs that have limited financial track records, lack of collateral, and lack of documentation (Raquiza, 2022).

However, microfinancing by institutions helps the poor and low-income households with their microenterprises and small businesses. This is done through a broad range of financial services such as loans, savings, and microinsurance. Microfinance was recognized as a legitimate banking activity in 2000 and was formalized in the country's financial system (Bangko Sentral ng Pilipinas, 2013).

In addition to financial services, microfinance institutions have offered non-financial services as part of their holistic method in alleviating poverty in the country. These may include capacity building by giving out business trainings to clients, giving scholarships to their children, conducting community development projects like free health services, and even linking their business to potential clients (Irorita, Corpuz, Abad, & Respicio, 2023), which is how a value chain model is usually used and maximized.

As a benchmark, an example of a microfinance organization with a value chain model is the CARD Business Development Services Foundation, Inc. (CARD BSDFI). CARD Mutually Reinforcing Institutions (CARD MRI) envisioned "to become the main vehicle in integrating its clients into the mainstream economy while being socially responsible citizens by providing for their holistic range of business and social service needs."

Among CARD BSDFI services is the Agricultural Trading Program, which caters to CARD MRI clients engaged in crop production. BSDFI buys the rice production of farmers, then stores the products in a partner-miller warehouse. The palay is then milled into rice, which is sold to outlets BDSFI has arrangements with. This setup is powered by BDSFI's partnership with traders, wholesalers, retailers, and other stakeholders.

Although not a microfinance institution, Gawad Kalinga Enchanted Farm (GKEF) is also an excellent example of an organization utilizing an ecosystem approach in its operations. This is done through the symbiotic relationship among GKEF's programs and activities. For instance, GKEF helps its members create value by equipping them with resources for their businesses, like parcels of land and technical training done inside the farm. GKEF's tourism activities also augment the members' support as they can sell their products to the visitors and guests. To make this business model work, GKEF has a network of suppliers and partners they have arrangements.

Thus, a value chain (VC) approach can be a promising strategy to improve incomes and livelihood situations in the country (ADB, 2022). Development agencies use Value Chain Analysis to identify how less privileged people, small enterprises, or other target groups can play a more significant and lucrative role in a particular value chain. The value chain approach will help with the commercialization of smallholder production by linking producers to middlemen, markets, and consumers (IFAD, 2014).

Likewise, how can a value chain's structure or characteristics be changed to enable it to grow in pro-poor ways (Heifer Project International, 2013). The purpose of this study then is to assess the existing value chain of the respondents' businesses related to the production, logistics, and retail of goods and commodities of select micro and small enterprises from the following industries: agriculture, food processing, fishing, livestock and poultry, and arts and crafts. This study aims to provide insight into what role organizations, both public and private, can play to strengthen the links in the chain and key actors. Their link with other entrepreneurs is reinforced while supporting all the chain players through financial and non-financial inputs.

2. DEFINITION OF TERMS

To facilitate understanding of topics in this study, different terms are defined herein.

Value Chain. This term refers to the complete cycle of a product or service from production to consumption.

Value Chain Analysis. This refers to the diagnostic tool used to characterize different actors in the value chain, identify processes, and note of any problems in the value chain.

Micro- and small entrepreneurs. Micro enterprises are those with asset sizes of up to P3,000,000 and 1-9 employees, while small enterprises are those with asset size bigger than micro but up to

P15,000,000 and with 10-99 employees (under Republic Act No. 9501 or the Magna Carta for MSMEs).

Profitability Analysis. This refers to the process of systematically analyzing the profit-cost ratio of key actors in the value chain.

Activities. This refers to any big or small processes, tasks, and actions that take place in the value chain and are done by value chain actors to complete the production-to-consumption cycle.

Commodity. This term refers to the product that is being bought and sold in each of the industry's value chains.

Key Actors. This refers to the person of interest being interviewed and followed throughout the value chain as they move the commodity from production to consumption.

3. OBJECTIVES

This study aimed to conduct a value chain analysis (VCA) of micro- and small entrepreneurs' businesses. More specifically, the study aims to:

1. Map out the value chain of each identified commodity per industry type (agriculture, food processing, fisheries, livestock & poultry, and arts & crafts) using the components: main activities, key actors, flow of products and services, and specific activities.

2. Assess value chain actors and processes through marketing profit and consumer peso share. 3. Identify areas in the value chain that have production and/or marketing problems.

4. REVIEW OF RELATED LITERATURE

The value chain model was first conceptualized by Michael Porter in 1985, and it comes from the business management aspects. Initially, the framework seeks to analyze the value creation at the firm level. It was laid out that the value chain is a series of operations that a company in a particular sector goes through to provide the market with a valuable product or service (Porter, 2004). The total cost of all the activities for development and market service yield value minus the total revenue is best described as the value chain of a business (Porter, 2001).

Value chain analysis then decomposes the firm into different activities, and those activities will be studied, on what their economic implications are. The primary activities are inbound logistics, operations, outbound logistics, marketing and sales, and service, while support activities include procurement, human resource management, and firm infrastructure. These support activities assist the primary activities to attain competitive advantage (Porter, 2004).

The study of value chains consists of two key concepts: value and chain (German Technical Cooperation, 2005). The term value was synonym to "value added" in the Value Chain Analysis (VCA). It characterized the incremental value of a resultant product produced from processing a product. For agricultural products, value addition could also occur through differentiation of a product based on food safety and functionality. The price of the resultant product showed its incremental value. The term chain refers to a supply chain, indicating the process and the actors involved in the life cycle (from conception to disposal).

Thus, the value chain is defined as the collection of value-added processes from the moment a commodity or service is produced until it is used (Sturgeon, 2000). It necessitates organized interactions between the chain's actors, including suppliers, sellers, processors, and service providers. Every phase in the supply chain adds to the value of the products sold. Participants in the chain benefit from lower business costs, improved access to technology, knowledge, and resources, thus gaining higher value and providing better quality goods (ADB, 2012). Input suppliers, traders, distributors, logistics service providers, processors/manufacturers, and customers are examples of chain participants' economic agents.

Value chain analysis (VCA) illustrates the broad range of value-added practices that go into a product or service, from its conceptualization to its end use. This analysis is conducted by companies by looking into each production step and finding ways to improve the product and increase the efficiency of the chain. The roles and interrelationships of primary actors and other stakeholders would be identified by analyzing the chain.

As the goal of the VCA is to improve the chain, identification of sales markets, unmet demand, supply channels and trends within the chain, and competitors are also involved (Tantray, 2014). Another expected output from VCA is recognizing constraints and opportunities that limit the value chain growth. Its main purpose is to increase the efficiency of the chain, so products and services are delivered at maximum value but at the lowest possible cost (Inchainge, 2023). Thus, both private and public institutions have conducted studies on specific commodities using VCA.

Asian Development Bank (2022) published a report on the Agricultural Value Chain Development in Selected Asian Countries. The study was about analyzing losses of priority commodities, identifying constraints, and developing new strategies. Their value chain analysis framework was composed of (1) general industry/end-market assessment, (2) value chain mapping, and (3) in-depth analysis of post-harvest losses along the chain. Key Informant Interviews (KII) were conducted with key target players or actors identified, such as farmers, traders, and processors.

Stobierski (2020) also enumerated similar steps in doing VCA, which were to identify value chain activities by listing all primary and secondary activities that go into creating and moving the commodity through the value chain. Next is to determine the value that each actor adds and the costs they incur along the process. Lastly, identify competitive advantage opportunities from the evaluation of costs and value associated with each process in the value chain.

Profitability analysis is also done as a further examination of post-harvest losses. Labor force costs, material inputs, contract price of products, and net returns are tallied to get the profit-cost ratio. Farmers producing processing tomatoes, for example, have a profit-cost ratio of 0.66, which means there is a need to reduce the cost of production (ADB, 2022).

Motivations for conducting profitability analysis include getting help to understand and to check the underlying activities that reduce profit margin and sales growth. Profitability ratios help in understanding management decisions and assessing the success factor of strategies made (Nissim, 2022).

Using these methodologies, this study aims to collect data from key actors and characterize them and their roles in the value chain. Another purpose is to compare profitability ratios between activities and actors to aid in creating strategies that will maximize profits and lower costs.

5. METHODOLOGY

5.1. Research Design

The study employed a concurrent mixed methods research strategy, where both quantitative and qualitative data collection was conducted at the same time using a self-developed survey tool. Specifically, a concurrent triangulation design was used to validate the findings from each quantitative and qualitative result through the results produced by the other (Andrew & Halcomb, 2009).

Each of the identified players in the different industry value chains had varying questionnaires. However, questionnaires were mainly composed of three main parts: (1) Demographic and Business Profile; (2) detailed questions about the value chain like their production, operating, and marketing expenses; and (3) probing questions on their problems and challenges throughout value chain activities.

5.2. Research Respondents

A total of 140 micro-small entrepreneurs from Cebu under five different pre-selected industries were interviewed. The respondents were selected through purposive sampling; producer entrepreneurs were chosen from the initial population client list of a microfinance institution by looking at certain characteristics like nature of business, business product, and location. To get respondents for the remaining value chain actors, snowball sampling was used by asking the initial producer respondents for their customers and so on.

Potential respondents were initially contacted via phone, email, and social media platforms. Upon obtaining consent to participate, an interview will be scheduled (via phone, virtual, or face-to-face).

If applicable, a Google Form link will also be sent to the respondent to answer in advance. Data was encoded in Microsoft Excel. Answers to open-ended questions were processed qualitatively, through the identification of emerging themes.

5.3. Data Analysis and Presentation

5.3.1. Value Chain Mapping and Assessment

This study was guided by the value chain mapping and assessment framework. Value chain analysis illustrates the broad range of value-added practices undertaken by farmers, firms, and workers, which operate from conceptualization to end use. Its classification is input-to-output in the industrial organization, as stated in the study of Ramirez et al. (2020).

The making of value chain maps in each industry and its identified commodity involved four components, as shown in Figure 1.

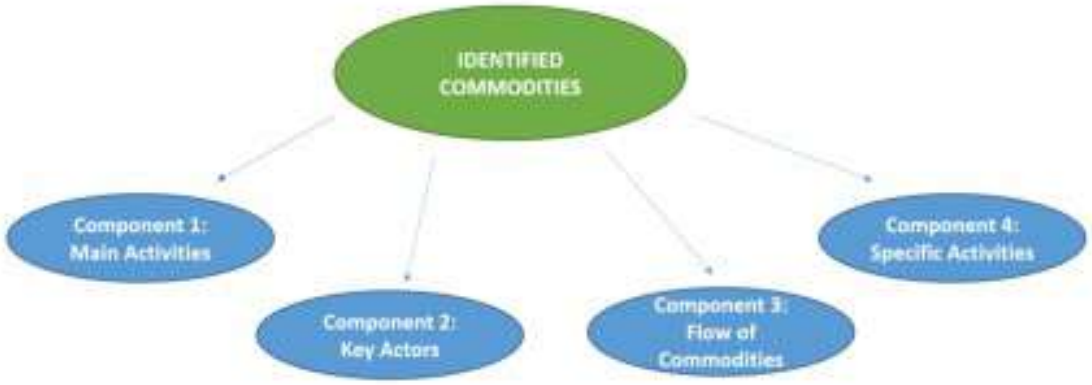


Figure 1 *Value Chain Analysis Components*

Commodities will first be identified among the products of respondents interviewed. Main activities are the main stages or processes from the start to the end of the value chain. Key actors of the value chain will also be shown and their relationship to each other. The flow of commodities will include information on the actors and to whom they sell their products. Last are the specific activities, where it includes information on what actors in the value chain do under the main activities in the value chain. This will also help gauge how each actor contributes to the value of each commodity.

5.3.2. Marketing Profit and Consumer Peso Share

Based on the data collected regarding product prices and variable costs from the different key actors of the value chain, marketing profit and breakdown of consumer peso were calculated. Marketing profit, in peso (Php) per product unit, shows the profitability of each product unit across key actors in the value chain process, while peso share shows the breakdown of consumer peso according to the amount shared by each actor for every peso paid by the consumer for every product unit purchased.

The equations used to calculate the marketing profit (MP_P) and peso share (PS_P) of producers are the following:

$$MP_P = PP - VC$$

$$PS_P = \frac{PP}{RP}$$

where *PP* is the producer price, *VC* is the variable cost incurred, both production and marketing costs, per product unit, and lastly, *RP* is the final retail price or the price paid by the consumer.

Similarly, for non-producer actors in the value chain process, the equations used to calculate the marketing profit (MP_{WR}) and peso share (PS_{WR}) of producers are the following:

$$MP_{WR} = SP - VC_{WR}$$

$$PS_{WR} = \frac{SP - BP}{RP}$$

where *SP* is the selling price of the actor, VC_{WR} is the variable cost incurred, which is the sum of the buying price and marketing costs per product unit, and *BP* is the buying price of the product as indicated by the intermediaries in the value chain.

These calculations also show how product prices are rising among value chain agents and by how much in proportion to other actors in the value chain. The exchange activities (purchasing, selling, wholesaling, and retailing), physical functions (transportation, storage, processing, packaging), and facilitating functions are all done in the chain (sorting and grading, financing, market intelligence, and various forms of market promotion). Thus, as items travel from lower to higher stages of the market chain, these actions add value to the product, as seen by rising prices (Pabuayon et al., 2009).

6. RESULTS AND DISCUSSION

6.1. Agriculture Chain

The farmer respondents interviewed are observed to be older, with an average age of 50.12 years old, ranging from 34 to 61 years of age. This aging phenomenon of farmers appears to be a global phenomenon, and not an isolated case (Rigg, Phongsiri, Promphakping, Salamanca & Sripun, 2019). Having farmers in ageing population may result to non- succession of farm operations among the heirs who might prefer working elsewhere rather than on the farm (Carolan, 2018), and may also mean lesser physical labor to be dedicated or can be available to the farm operations, thus there is need for labor- efficient approaches such as use of machines or equipment (Hamilton, Bosworth, & Ruto, 2015).

In terms of farm size, the survey revealed that the mean land size of sampled households was 1.42 hectares, ranging from 0.5 to 6.0 hectares. A relatively small farm size would mean intensive use of resources and resorting to the production of crops with higher value to maximize income per unit area of land (Coxhead, Shively, & Shuai, 2002). But in the case of the farmer respondents, 62.5% of them planted different types of crops or commodities throughout the year.

When farmer respondents were asked about their usual crops, the majority of these farmer respondents planted chayote (50%). This implies that chayote is more likely to be a homegrown vegetable. Planting chayote along fences, bushes, and even straight up trees is a common technique among homeowners. Chayote also seems to grow with reasonable ease due to its adaptability to a wide range of climatic conditions. (Vieira, Pinho, Ferreira & Delerue-Matos, 2019).



Figure 2 *Mapping of Chayote Value Chain in Cebu Province, Philippines*

The main activities of the chayote value chain, its key actors, and their specific activities are shown in Figure 2. Main activities identified for the chayote value chain are procurement of inputs, production, trade and sale, and consumption. Farmer respondents are the key actors for the production stage, while wholesalers and retailers are found to perform under the trade and sell

activity.

In the study, input suppliers in the local market, like Agrivet supplies, hardware, and other farm suppliers, are responsible for the availability of farm inputs and implements. The farmer in the value chain is responsible for production. The farmer purchases farm inputs and implements from the input supplier. The farmer's responsibility is to combine all the farm inputs in the land area available for production. Farm operations like clearing, transplanting, care and management, harvesting, and some pre-sales activities are their functions. The wholesaler will collect all the chayote produce of the farmer and trade it to another wholesaler or retailer. In chayote, wholesalers and retailers are responsible for trading and selling it to be made available to the consumer for consumption.

In terms of consumer peso share, for every peso purchased by the consumer, a third of it returns to chayote farmers. Wholesalers and retailers also have the same consumer peso share of 0.33 as shown in Table 1.

Although retailers have greater marketing profit than wholesalers, wholesalers have higher volume of chayote purchased and sold on average, as shown in Figure 2, where the wholesalerscollect a total of 1,000 pieces of chayote from different farmers and sell them to different retailers.

Chayote farmers receive an equivalent share of consumer price with wholesalers and retailers but remain to have the least amount of marketing profit among the three. These values are very low considering the farmers bear the greatest risk of harvesting losses and losing all production costs (Sanchez-Toledano, Cuevas-Reyes, & Lopez-Santiago, 2022).

Table 1 *Marketing Profit and Breakdown of Consumer Peso for each actor in the Chayote Value Chain in Cebu Province, Philippines*

Value Chain Actors	Farm Price (Php/pc)	Buying Price (Php/pc)	Selling Price (Php/pc)	Marketing Profit (Php/pc)	Breakdown of Consumer Peso
Producer	5.00			1.43	0.33
Wholesaler		5.00	10.00	2.20	0.33
Retailer		10.00	15.00	3.30	0.33

In the study, farmers had plenty of problems from inputs to marketing the product. In the input, farmers encounter planting material that is susceptible to disease, poor quality, and germination problems, and other inputs like fertilizer and pesticide it is very costly. Following ADB's short-term upgrading strategies for agriculture (2022), input supply issues should be addressed by exerting efforts to strengthen the supply and distribution of certified disease-free seeds and seedlings.

Additionally, farmers should also be given training in good agricultural practices to reduce problems during the production stage, leading to high harvesting losses. This training could include topics such

as appropriate use of organic and inorganic fertilizers, control of pests and diseases through agro-chemicals, and so on (ADB, 2022).

6.2. Food Processing – Processed Meat Chain

For the processed meat (chorizo) value chain in Cebu Province, the first actors are the producer of chorizo. Among producer respondents interviewed, two-thirds of them were micro-scale producers, and the rest were small-scale. Delineation was based on their production quantity, production schedule, and customers. Micro-scale producers were found to produce 15 kilograms of chorizo on average per production process, and they do not follow a fixed schedule. They also directly transact with the consumers or end-users since most are their repeat customers or sell through online platforms.

Consequently, small-scale producers engage with wholesalers and retailers wherein their products get picked up, as shown in Figure 3. Chorizo and other processed meat products are then displayed in public wet markets like Carbon, which is the most frequent and common, as it is also the biggest in Cebu City. They also produce 130 kg of chorizo on average at least thrice a week.

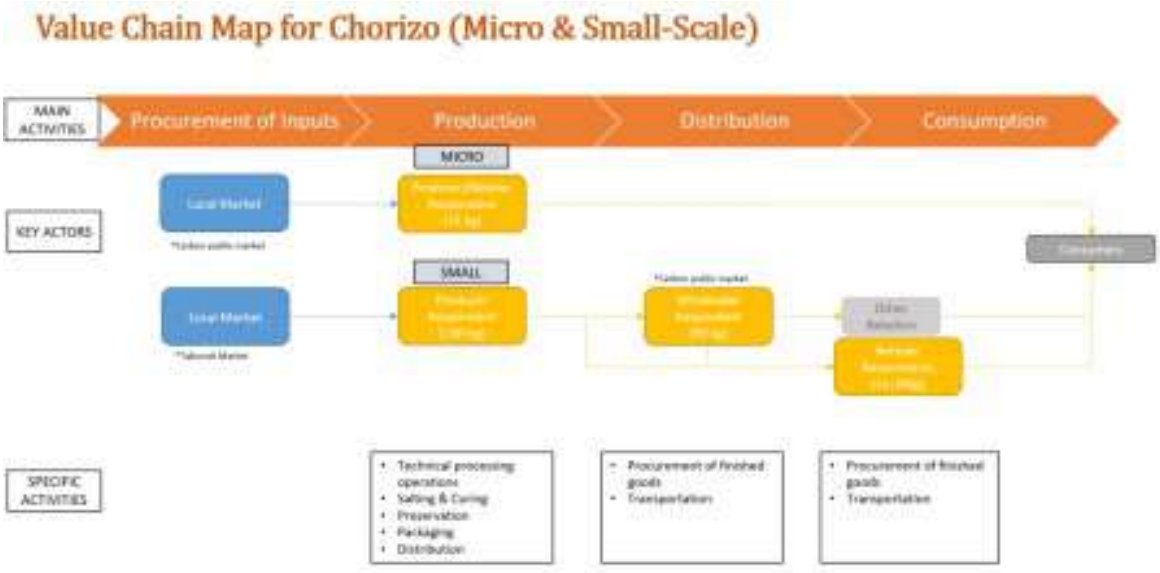


Figure 3 *Mapping of Processed Meat Value Chain (Chorizo) in Cebu Province, Philippines*

Many activities in the processed meat value chain were depicted in Figure 3. Strictly technical operations like cutting, chopping, comminuting, mixing, tumbling, stuffing/filling of semi-fabricated meat mixtures into casings, synthetic films, and some heat treatments are included in meat processing technologies. Chemical or biochemical procedures are also commonly used in conjunction with technological operations in the meat processing industry. Salting and curing are

among them, like spices and additives, smoking, fermentation, and drying. Additionally, the processes used in meat preservation are principally concerned with inhibiting microbial spoilage. However, other preservation methods are sought to minimize other deteriorative changes such as color and oxidative changes, and essential that adequate preservation technologies are applied to maintain safety and quality (Aymerich, Picouet, & Monfort, 2008).

The value that meat wholesalers add to the chain is to bring the product nearer to the customers in their business area, as there is no packaging or repacking done among wholesalers.

The processed meat retailers did not specify the pricing of costs, but product price increases are almost the same for all the products sold in packs or bundles of processed meat like lumpia and longanisa. Retailers also do all the business activities. Thus, they do not spend on workers' wages. This pattern is evident for all nodes of the meat value chain, which is relatively noticeable considering that their businesses are small-scale.

Table 2 *Marketing Profit and Breakdown of Consumer Peso for each actor in Chorizo Value Chain in Cebu Province, Philippines*

Value Chain Actors	Producer Price (Php/kg)	Buying Price (Php/kg)	Selling Price (Php/kg)	Marketing Profit (Php/kg)	Breakdown of Consumer Peso
			Micro		
Producer	166.67			48.33	1.00
			Small		
Producer	230.77			51.85	0.79
Wholesaler		230.77	280.77	36.18	0.17
Retailer		280.77	292.31	37.21	0.04

As the only key actor in the value chain, the micro-scale producer gets 100% of the share in consumer peso. Their marketing profit is also at Php 48.33 per kg of chorizo, which is almost 25% of the producer price. Small-scale producers have relatively the same marketing profit but have higher production costs due to storage and labor costs.

Wholesalers and retailers in the small-scale chorizo value chain only have a total of 21% consumer share, where they each get 0.17 and 0.04, respectively, for every peso purchased by the consumer. But both of their marketing profits are more than half of the producers', which is relatively high considering that the activities of both are mainly about transporting and selling of products.

Being micro-scale processors, the problem lies mainly in the inactivity of production due to no fixed schedule and production quantity. They also do not process in bulk and only store them in household freezers and refrigerators for direct selling to consumers. Thus, their products need to be disposed of in two weeks, preventing food spoilage and other food safety issues when processing large scale.

Thus, micro-scale producers prefer to sell their chorizos to their neighbors or engage in online selling. This is unlike small-scale producers that sell their chorizos to wholesalers and retailers.

However, the meat processing trade is primarily informal, with no written contracts between actors. In general, the relationship between actors at all levels is bound by the suki relationship. The suki relationship in the Philippines is often simply a credit/marketing linkage (Rosales et al., 2017) which provides an avenue for traders to conduct business without cash-out. This shows that trust has been increasingly important in the evolution of marketing theory as corporate marketers have placed a larger emphasis on creating long-term connections (Handfiel, 2019).

6.3. Fishing – Capture and Aquaculture Chain

A total of 15 producers were interviewed, of which 12 came from capture fisheries while three were from the aquaculture sector. All fisher respondents (100%) are classified as small-scale fishermen or municipal fishermen who have been fishing for 11- 20 years (40%).

Regardless of lean or peak seasons, fishers catch a variety of species. Based on the key interviews with producer respondents engaged in capture fisheries, the top 3 species identified were tamarong (8.91%), nokus (7.92%), and danggit (7.92%). Thus, this study chose to focus on the value chain of tamarong (big- eye scad).

For the producers in the business of aquaculture, they were from Ronda and mainly involved in the culture of bangus (milkfish) in marine fish cages measuring 500 m^2. The culture of bangus in marine fish cages is classified as a semi-intensive system of culture. They culture bangus all year round, though they only harvest twice a year. But respondents claim that they only harvest when market prices of bangus are favorable.

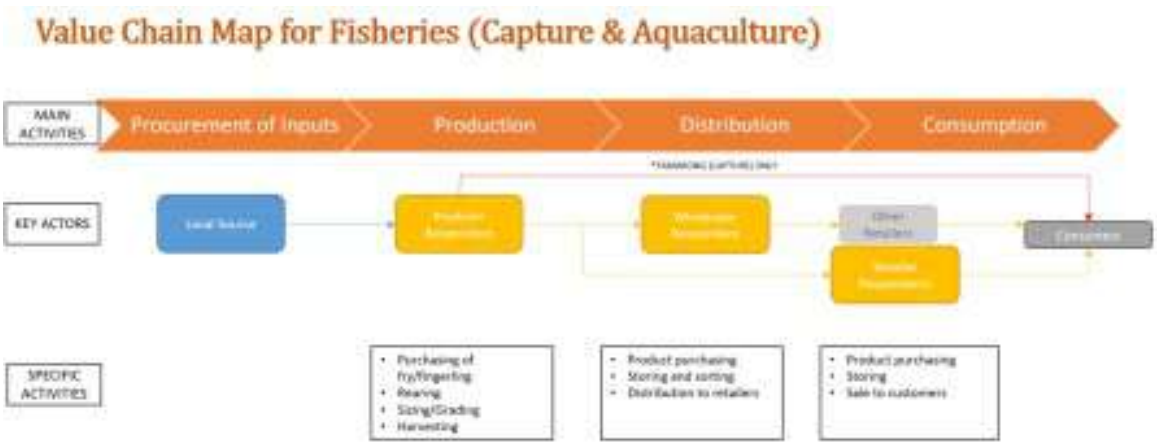


Figure 4 *Mapping of Tamarong (Capture) and Bangus (Aquaculture) Value Chain in Cebu Province,*

Figure 4 shows the value chain map of tamarong for capture fisheries and bangus for Aquaculture. Both have relatively the same activities (both main and activities), key actors, and commodity flow, except for the part where producers of tamarong also sell their produce directly to consumers, as opposed to producers in aquaculture.

For wholesalers, whether they would be selling fish caught from fishermen or harvested from culture areas, they are essentially selling fish all the same and basically have the same inputs for their business; this includes capital, fish, ice, weighing scale, transport, and storage areas.

Wholesalers are highly dependent on producers for their product; they also get affected during the peak and lean seasons. For wholesalers selling caught fish, during the peak seasons, they purchase 51-100 kg of fish (57.14%) at a daily rate and sell with less than 10% (20% of respondents) to 11-20% mark-up (20% of respondents) in price. In contrast, during lean seasons, they purchase 11-50 kg of fish (42.86%) at a daily rate (55.56%) and a mark-up of 11-20% in price (36% of respondents).

For wholesalers selling harvested fish, during the peak and lean seasons, they buy and sell 100- 500 kilograms of fish (75%) daily with an 11-20% mark-up. Harvested fish are available year-round and are not affected by the peak and lean seasons of capture fisheries.

A notable statement from wholesalers selling caught fish is that they don't really mind the lean season and instead, they actually welcome it as long as they still get some amount of fish to buy and sell. This is because when fish supply is down during the lean season, especially for valued marine species that are not subjected to aquaculture, their prices can go really high, thus increasing the wholesaler's profits. The only challenge for them during lean seasons is finding fishermen or sources to buy their caught fish.

Unlike wholesalers, there are retailers that would stop buying fish when they are in season, specifically harvested fish. This is because during peak seasons, there are a lot of fish in the market, and since cultured fish are available all year round, the prices for cultured fish are generally on the lower end (except if they are highly valued species like groupers). Retailing cultured fish during peak periods would result in lower profits. However, during lean months wherein there is barely any caught fish from small-scale fishermen, this is when retailers turn to cultured fish to retail. As there are barely any other fish, the prices of harvested fish during the lean months would go up (starting from the previous key players), leading to higher prices which
equals higher profits, and more importantly, retailers would not have a day without profit just because there is limited municipal catch.

Table 3 *Marketing Profit and Breakdown of Consumer Peso for each actor in Tamarong and Bangus Value Chain in Cebu Province, Philippines*

Value Chain Actors	Producer Price (Php/kg)	Buying Price (Php/kg)	Selling Price (Php/kg)	Marketing Profit (Php/kg)	Breakdown of Consumer Peso
		Tamarong (Capture)			
Producer	140.00			107.59	0.70
Wholesaler		140.00	160.00	18.11	0.10
Retailer		160.00	200.00	13.36	0.20
		Bangus (Aquaculture)			
Producer	140.00			49.00	0.78
Wholesaler		140.00	160.00	18.00	0.11
Retailer		160.00	180.00	13.62	0.11

Table 3 shows the marketing profit and breakdown of consumer peso for each actor in the capture fisheries (tamarong) and aquaculture (bangus) value chain. It shows that both have a relatively the same breakdown of consumer peso across each actor in the value chain. Wholesalers and retailers also have relatively the same amount of marketing profit.

However, it is observed that producers engaged in capture fisheries have relatively higher marketing profit than producers in aquaculture fisheries. This may be due to capture producers not including their own labor costs when declaring production costs. Also, even with the profit difference, aquaculture producers are still in a better position as they can choose to harvest their bangus anytime. This is unlike capture producers that are very dependent on seasons.

There are days when fish are abundant (peak season) and days when the wild catches have significantly reduced (lean season). In both seasons, fishermen in capture fisheries tend to fish daily (71.11% for peak season; 46.67% for lean season). During peak season, 37.78% of respondents harvest 1- 5 kilogram/s per operation. During the lean season, 44.44% reported that they only catch less than 1kg per operation.

Some respondents admitted that at times their fishing operation costs are higher than their income from selling meager catch. Despite that, fishers still go out at sea because of the lack of livelihood alternatives and because they got “used” or complacent with that kind of lifestyle.

6.4. Livestock – Swine Chain

Pork is the most commonly consumed type of meat, and as the demand is expected to rise further, food safety has become one of the major concerns as the country bears a high burden of foodborne diseases that include pork products. Knowledge of the flows of pigs and pork from producers up to the consumers is very important (Lebailly et.al., 2020).

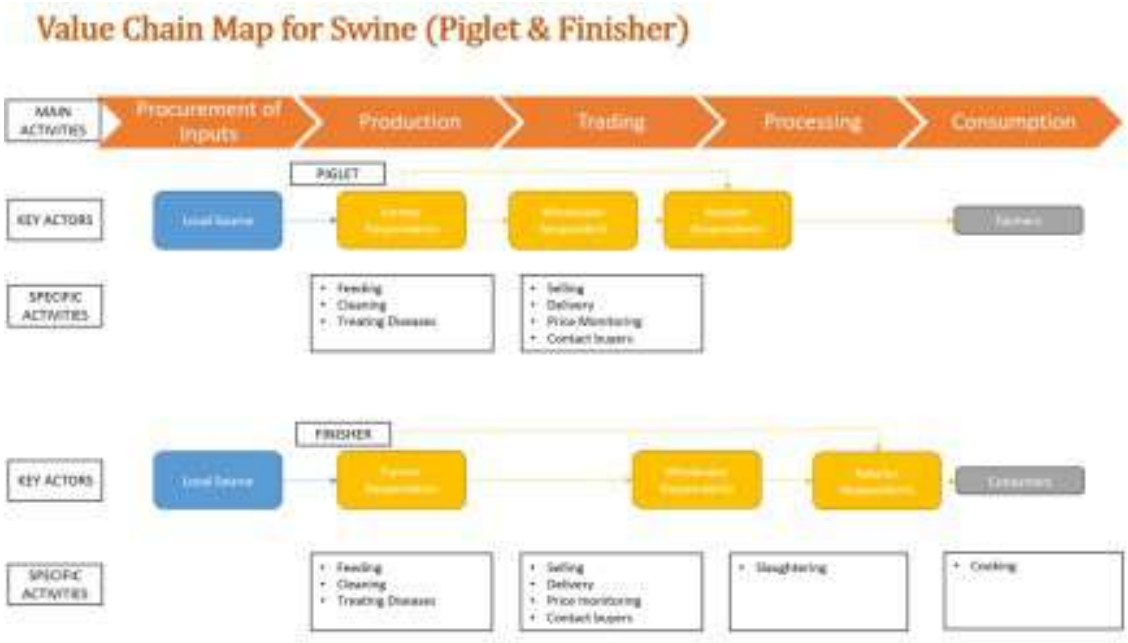


Figure 5 *Mapping of Livestock Value Chain (Swine) in Cebu Province, Philippines*

The map of the piglet value chain (Figure 5) of Cebu includes the chain's primary activities, value chain actors, and supporters. The value chain map consists of three actors, which are the producers, the middlemen (wholesalers/retailers), and consumers, which do primary activities such as production and trading. The inputs needed for production are feeds, medicines, housing, and labor. The inputs are used for feeding pigs, cleaning pig units, and treating diseases. All producers have reported utilizing family labor in the business. They mostly help in feeding hogs, cleaning pig units, and providing financial assistance in times of need.

Once a sow has weaned her piglets in 27 to 30 days, they are sold to wholesalers and retailers. Traders oversee selling and delivering the piglets to their respective buyers such as abattoirs, meat vendors, and individual farmers. Also, they monitor prices and contact their buyers to generate more sales.

Meanwhile, the finisher value chain (Figure 5) consists of primary activities such as production, trading, processing, and consumption by the following actors: producers, wholesalers, retailers, and consumers. Inputs such as feeds, medicine, housing, and labor are used and important in swine production. These help in feeding, cleaning, and treating diseases. Once swine grow for 15 weeks or more than 3 months, they are sold to wholesalers for trading. Wholesalers primarily sell, deliver, monitor market prices, and contact buyers to resell the swine purchased. They usually buy in bulk to gain more profit. They are then sold again to other wholesalers and retailers, usually for slaughter. They are then sold off to meat vendors and entrepreneurs. Swine becomes a commodity and is sold to consumers for consumption.

Table 4 *Marketing Profit and Breakdown of Consumer Peso for each actor in Piglet and Finisher Pig Value Chain in Cebu Province, Philippines*

Value Chain Actors	Farm Price (Php/hd)	Buying Price (Php/hd)	Selling Price (Php/hd)	Marketing Profit (Php/hd)	Breakdown of Consumer Peso
		Piglet			
Producer	2,500.00			984.37	0.83
Wholesaler		2,500.00	2,775.00	251.50	0.09
Retailer		2,775.00	3,000.00	191.50	0.08
		Finisher Pig			
Producer	5,500.00			3,826.73	0.65
Wholesaler		5,000.00	7,500.00	1,750.00	0.29
Retailer		7,500.00	8,500.00	886.10	0.12

Table 4 shows the breakdown of consumer peso share of each actor in both the piglet and finisher pig value chains. Wholesalers and retailers in the finisher pig value chain have a higher consumer peso share, with a total amount of 0.41, than those in the piglet value chain, with a total amount of 0.17. They are entitled to their share, as they are wholesalers and retailers of finisher pigs and have a lot of processing activities, unlike traders of piglets, who generally trade and sell commodities to consumers.

Marketing profits of actors from the finisher pig value chain are relatively higher since finisher pigs are reared up to 3 months and would require a lot of farm inputs and production costs. Finisher pigs are also bigger and heavier, thus producing more meat and other products for consumers.

6.5. Poultry – Native Chicken Chain

The map of the value chain of native chickens in Cebu province is presented in Figure 6. Main activities in the value chain include production, trading, and processing. The main actors are the producers (household poultry raisers), traders (middlemen), processors (lechon manok vendors), and consumers. Production activities are practically centered on the rearing of native chickens from chicks to marketable size. Production needs inputs like feeds, veterinary drugs/medicines, housing materials, and labor. These items are associated with certain costs depending on the area as well as availability of supplies. Trading involves selling, delivery of products to the next actors in the chain, price monitoring to gain the most profit, and contact with the most likely buyers or established buyers.

Figure 6 *Mapping of Poultry Value Chain (Native Chicken) in Cebu Province, Philippines*



The direct channel from the producer to the processor is important, as farmers have already established contact with processors, such as *lechon manok* vendors, whenever a large supply of native chickens is needed. Producers can also sell their chickens at public or livestock markets during market days ("tabo"). The Mantalongon Livestock Center, for instance, is crowded with buyers and sellers of various kinds of livestock, particularly poultry, every Thursday of the week. Native chickens are often sold live rather than dressed in Cebu province.

Table 5 *Marketing Profit and Breakdown of Consumer Peso for each actor in Native Chicken Value Chain in Cebu Province, Philippines*

Value Chain Actors	Farm Price (Php/bird)	Buying Price (Php/bird)	Selling Price (Php/bird)	Marketing Profit (Php/bird)	Breakdown of Consumer Peso
Producer	123.13			73.63	0.59
Wholesaler		123.13	165.00	23.00	0.20
Processor		165.00	208.75	92.80	0.21

It is interesting to note that across the value chain, the processors obtained the highest marketing profit, followed by the producers, despite having a lesser consumer peso share than producers. Native chicken production and processing appear to be more profitable than trading live native chickens.

6.6. Arts and Crafts Chain

Pandanus mat has a cheaper materials/input cost of about P27.5 per product, including the primary material, Pandan leaves, and dye. They purchased their products locally from the smallholder farmers of their barangay who are into Pandan production.



Figure 7 *Mapping of Arts and Crafts Value Chain (Pandanus Mat) in Cebu Province, Philippines*

As shown in Figure 7, key actors in the value chain are the producers, wholesalers, retailers, and end users. Producers take on production inputs, tasks, and costs, while wholesalers and retailers are generally in charge of marketing-related tasks like packaging buying and selling, and making sure it reaches their customers. Producers sell to wholesalers, and wholesalers sell to retailers, then bring it to end-users, but sometimes there are direct sales happening between producers and end-users.

Making mats is so labor-intensive that it takes almost four days (3 days & 6 hours) to produce a finished product. Mat weavers do not hire laborers for their products since they only employ family labor, and they can only produce an average of 3 mats per week since the process will take about four days to finish.

Table 6 *Marketing Profit and Breakdown of Consumer Peso for each actor in Banig Value Chain in Cebu Province, Philippines*

Value Chain Actors	Farm Price (Php/pc)	Buying Price (Php/pc)	Selling Price (Php/pc)	Marketing Profit (Php/pc)	Breakdown of Consumer Peso
Producer	80.00			52.50	0.53
Wholesaler		80.00	120.00	25.00	0.27
Retailer		120.00	150.00	30.00	0.20

Table 6 shows the marketing profit and breakdown of consumer peso share for each actor in the value chain of pandanus mat. The highest consumer peso share is the producer, with 0.53 for every peso spent by a customer on banig, while wholesalers and retailers have 0.27 and 0.20, respectively. Producers also appear to have the highest marketing profit compared to other actors.

However, production costs declared by producers do not include their labor costs since they don't pay wages to their family. Mat weavers also do not have a processing area as they only weave in their

respective houses. They do not own storage facilities as well, which affects their products since they cannot stock many products, as it will be affected by extreme hot and cold seasons, which will lead to unmarketable consequences or loss. Instead, they directly sell their finished products to their neighbor, a wholesaler of mats, because of the absence of storage facilities. This shows that producers have greater risk and disadvantage in selling their products as they have this urgency.

7. CONCLUSION AND RECOMMENDATIONS

7.1. Conclusion

There were a total of 140 respondents were interviewed for the different industry types: agriculture, food processing, fisheries, livestock and poultry, and arts and crafts. Commodities were then identified and chosen per industry for value chain mapping and assessment.

Most of the commodities' value chain maps show four main activities, where production is usually followed by distribution, trade and sales, and marketing before consumption. But the livestock and poultry value chain has five main activities, as they have a processing stage. This is the stage where wholesalers, retailers, and processors carry out labor-intensive activities as middlemen. They also do price monitoring when trading.

High monitoring is essential to middlemen, but it is most apparent to wholesalers and retailers in the fisheries value chain. Not only are their purchases and prices very dependent on the previous actor in the value chain, but they are also very dependent on the season.

Overall, producers are the most at risk of losses, especially of production costs and sometimes marketing costs. They also have the highest consumer peso share and marketing profit among actors found in the value chain.

Unfortunately, this is not true for chayote farmers, who had an equal consumer peso share with chayote wholesalers and retailers at 0.33 cents for every peso paid by theconsumer or customer. Farmer respondents also had the least marketing profit compared to other actors in the chayote value chain map.

Although producers of native chicken have the highest consumer peso share of 0.59, processors appear to have the highest marketing profit of Php 92.80 per bird. This scenario also occurred in other VC chains wherein the middleman has a larger return on their cost compared to other actors (Purcell et al., 2017; Maraseni et al., 2018).

Lastly, when declaring production costs, producers from capture fisheries, micro-scale chorizo, and the banig value chain map do not include labor costs, as they do not have salaried employees. Most of them rely on themselves or their family members for labor. This makes their variable costs underdeclared or their marketing profits overestimated.

7.2. Recommendations

One of the limitations of this study is that data gathering was done during the pandemic, and prices may not be the same after the quarantine has been lifted and most economic activities are back to normal. Future studies could be done after pandemic restrictions have eased, and there may be differences in their marketing strategies, especially with the rise of digital processes.

Future studies may also consider adding sets of criteria when choosing a commodity for each industry. As this study chose commodities based on frequency, it would be good to include criteria such as consumer assessment, future government policies, or assessment from interested stakeholders.

This study was also conducted in Cebu Province only, so replication in any province in the Philippines would be an opportunity for future contribution in the literature. Comparison between the value chain process, key actors, marketing profit, and breakdown of consumer peso share would be an avenue to see if regions or locations greatly affect these variables.

Lastly, future studies could explore other economic measures of profitability and efficiency for each actor in the value chain.

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Rubber Industry Profile: Input To Growth And Development Of Start-Up Manufacturing And Export Enterprises In Palawan

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ABSTRACT

For nearly two and a half decades since it gained upward trajectory in 1997 in Palawan, rubber tree *(havea brazilienses)* farming continues to motivate the minority of rural Palaweño farmers to stay on the line despite its topsy- turvy market situation. Though farm-gate prices most of the time hit the break-even point or even went below, they still tied their future in this industrial commodity to at least survive the economic turmoil or even improve their living conditions. The majority of farmers remain steadfast in their hopes that current circumstances affecting the local rubber industry will turn in their favor. This study has unearthed an important finding that may trigger a new development along the rubber value chain in the Province of Palawan.

Keywords: *Palawan*, *rubber industry*, *start up enterprises*, *SME*, *manufacturing*, *export*, *rubber processing*

1. INTRODUCTION

Natural rubber (*havea brasilienses*) is an important industrial commodity and a valuable export of rubber-exporting countries. This includes, among others, Thailand in the top spot, followed by Indonesia, Vietnam, India, and China[1]. These are the top 5 countries that are also members of the Association of Natural Rubber Producing Countries (ANRPC). Malaysia and the Philippines landed in 7th and 8th place, respectively, followed by Cambodia and Myanmar at the bottom. In 2023, according to Sun-sirs.com, Thailand produced 4.707 million tons (4.636 million tons of raw rubber), a little lower than 4.786 million tons (4.714 million tons of raw rubber) in the same period of 2022[2]. This is followed by Indonesia, producing 3,121,474 metric tons in 2021, Vietnam at 1,271,858 metric tons, and the Philippines with 430,636 metric tons, according to the World Population Report 2024. Malaysia, with 469,669 metric tons, was overtaken by Vietnam at the third spot due to lack of compliance and participation in the global export restriction policy, insufficient national price incentives, and the absence of national import regulations[3] *(Ali*, *Muhammad Fadzli & Akber*, *Md & Smith*, *Carl & Aziz*, *Ammar*, *2021)*. They argued that these factors have kept rubber prices low, leading to low profitability for smallholder farmers. Consequently, smallholder farmers reduced tapping activities and farm maintenance. Some have left rubber farming altogether in search of better income. This has reduced rubber plantation area and rubber production.

The Philippines export profile, according to *Daly and Gereffi (in*Ali, Smith, et al., 2021), has evolved in recent years, with the country downgrading its position within the value chain. This is characterized by changing its value proposition from being one of the exporters of semi-finished and final rubber products in the past to becoming a net exporter of raw rubber in the form of cup lumps. Numerous factors have been cited for this shift. Two main reasons include (1) rising energy costs that give rise to high logistical costs; and (2) producers earn more income from exporting cup lumps than from processed rubber in the Philippines due to quality

1 https://worldpopulationreview.com/country-rankings/rubber-production-by-country

2 https://www.sunsirs.com/uk/detail_news-17010.html

3

issues. Consequently, 77.5%-78% of the country's exports from 2014-2015 were cup lumps *(Daly and Gereffi, 2017)*. Philippine Statistics Authority (PSA) also reported 112.59 metric tons[4] of cup lump in the second quarter of 2023, confirming the existence and continuation of this shift in trading practices.

Palawan rubber industry has witnessed the gradual meltdown of rubber prices since it peaked at the short-lived P200 price level in the late 1990s, sinking ultimately to P16-P20 per kilo price levels during the 2022-2023 period. As a result, only a handful of farmers proceeded with the opening of their rubber trees for tapping. Some have gone farther by cutting their rubber trees. Some of them opted to wait for better farm gate prices to escalate. However, as of this date, no price improvement is seen in the immediate time horizon. It is a challenge and should be treated that way because no modern state in the world has become highly industrialized without the development of its agriculture *(Venita & Ramalingam,, 2017)*. Rubber will not be running out of uses since it is one of the most important raw materials for many industries in the world *(Imade Yoga Prasada and Aura Dhamira, 2021)*. With adequate and timely credit support, rubber provides a livelihood to smallholder farmers. It can be an excellent alternative plantation crop to inspire the marginalized farming sector *(Haripada Datta, Dr. Haradhan Debnath and Dr. Parag Shil, 2019)*. In view of the effects of dwindling and unstable rubber prices, the income of smallholder farmers can still improve by increasing crop and land productivity.

This research paper aims to create knowledge, awareness, and understanding of rubber as an industry in Palawan with the hopes of bringing the situation to light for further study in the academic, research, and business community. Primarily, it looks into the economic potential of the industry for investments in different segments along the value chain. It seeks to inform local investors of the economic value attached to value-creation or value-adding activities in rubber. Secondarily, the paper seeks to unravel the web of issues and problems that brought the entire local industry into a deep lull for nearly two decades, which spontaneously creates skepticism among the affected farming sector.

The output of this initiative will become an input to the locally borne small and medium enterprises that foresee an investment in processing and manufacturing rubber in the semi-finished and final products sector. This is, by far, the strategy that the local rubber farmers consider to be the alternative way to counter the persistent low farm gate prices that dominate and further slow down the recovery of the industry.

2. METHODOLOGY

2.1. Study Area

The first phase of this research project was conducted in Quezon and Rizal municipalities. These are the two adjoining municipalities in the southwestern section of the province of Palawan with the largest areas of rubber plantation. The municipality of Quezon, with a land area of 943.19 km^2 and located at 9° 14' North, 117° 59' East, is the pioneering town to embrace and engage in rubber farming in the mid-1980s. Rizal town, on the other hand, has a larger land area, standing at 1,256.47 km^2 and located at 9° 2' North, 117° 38' East. It started around the mid-1990s under the Palawan Tropical Forestry Protection Program (PTFPP) of the provincial government of Palawan.

2.2. Data Collection

4 https://www.psa.gov.ph/major-non-food-industrial-crops/rubber

Data for this study came from both primary and secondary sources. Questionnaires were distributed to get data from the sample of participants relative to their demographic profile, plantation profile, production practices, and the prevailing issues and problems that affect their rubber farming. Other interesting components of the industry were also considered in this study. This included the profile of workers, the support environment, and the network of traders, logistics, processors, and manufacturers. The support environment is defined in this study as the government agencies that provided assistance in whatever manner, including government financing institutions to the rubber farming sector. They have been included due to the fact that rubber farming was made a flagship of past government administrations. GFIs, on the other hand, should have played a vital role during this period of rapid rubber plantation development in bringing the purposes of the program to fruition.

2.3. Sampling Procedure

This study used a simple random sampling method. 101, or around 29.1% of the total population of farmers in both municipalities, were included in the study. 60 farmers were from Quezon and 41 from Rizal. Each barangay is considered as one cluster. Farmers within the cluster were then categorized into micro, small, medium, and large regardless of their legal personality, whether they are individuals or groups such as cooperatives or corporations. An association was not taken as one entity or corporate. Instead, each member of the association is taken as an individual. A cluster of micros is defined as those whose farms are three hectares and below, while small are those with four to 10 hectares. Medium are those farmers whose landholdings planted with rubber range between 11 and 20 hectares. Large clusters were those whose farms exceed 20 hectares. 50% of the farmers in each category were taken as subjects to represent the cluster.

2.4. Data Analysis

The data obtained from questionnaires were transferred to an Excel sheet to facilitate interpretation and analysis. Descriptive analysis was used to demonstrate what had happened in the rubber farming sector.

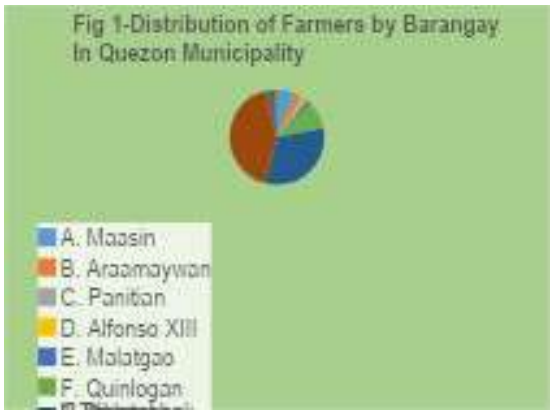
3. RESULTS AND DISCUSSION

3.1. Farmers Demographic Profile

3.1.1. Farmers Distribution

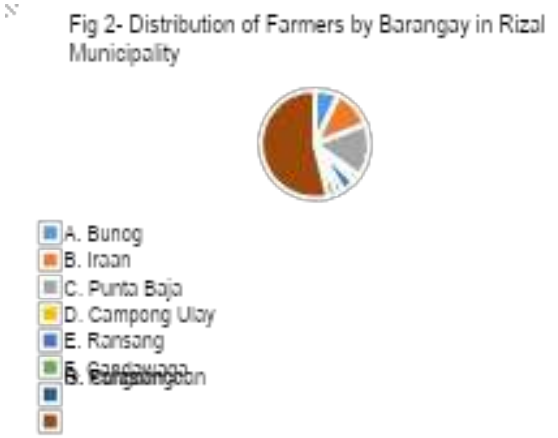
Based on the data collected from both municipalities, it was found that there are 347 farmers currently into rubber farming. 220 of them are in Quezon and 127are in Rizal municipality. The top 3 barangays in Quezon with a higher concentration of farmers include Kalatagbak, being the biggest with 80 farmers, followed by Isugod with 62, and Aramaywan with 29 farmers. In Rizal, barangay Panalingaan tops the list with 68 farmers, followed by Punta Baja with 20, and Iraan with 15. Interviews with some of the players in Kalatagbak reveal that the promotion of rubber farming by the pioneers in the mid-1980's had attracted more than a handful of investors from outside the province. The Bagong Pag-asa Foundation, the Dayrit family, and the Salleva group are examples of these industry promotions made by private individuals. One of these pioneers is Julian Sampayan, who is considered the legend of rubber farming in Palawan. At the dawn of the 1990s, the Provincial Government of Palawan under Governor Salvador P. Socrates started adopting the concept of rubber farming as a strategic economic and social mechanism to protect and maintain the forest cover of the island. It was through his concept of PTFPP (Palawan Tropical Forestry Protection Program) that this rubber expanded beyond the municipality of Quezon, the cradle of rubber farming. This expansion program continued with more vigor and spirit to its peak in the time of Governor Joel T. Reyes when he partnered with the then governor of

Cotabato, Manny Piñol. After this period, when rubber in Palawan should have started tapping, the local industry was welcomed by global slump in prices that continued up to this day.



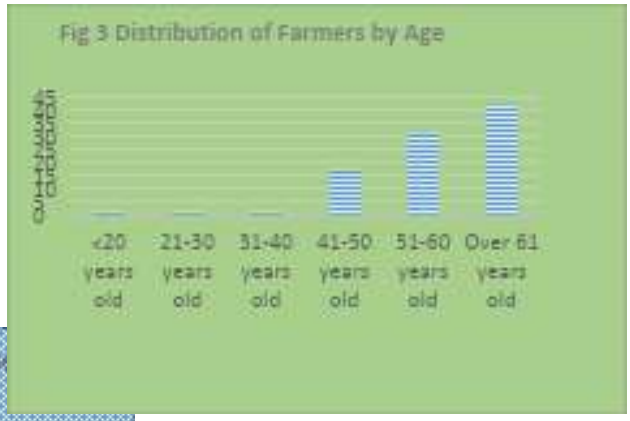
Degree of farmers' participation - To further understand the degree of their participation, farmers are grouped into micro, small, medium, and large. Micro is defined in this context as those whose farms are less than 0.25 hectares to 3 hectares. Small are those whose landholdings are between 4 and 10 hectares, medium with 11-20 hectares, and lastly, large are those whose landholdings planted with rubber are over 20 hectares. In the case of Quezon municipality, 84% or 184 of all the rubber farmers are in the micro group, while 12% (27) are those whose landholdings are between 4 and 10 hectares. The group of medium and large farmers shares 1% and 3%, with only 2 and 6, respectively. In the municipality of Rizal, a similar trend was also found, with 83% of the farmers falling into the micro group, followed by small with 14%. Both medium and large farmer groups are only 3%.

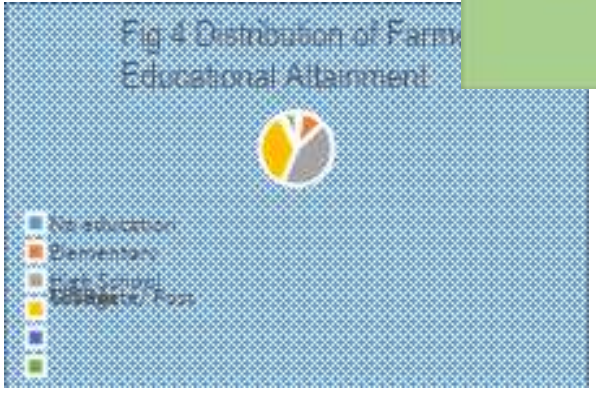
However, in terms of area planted, the data collected and analyzed in both study areas reveal a contrasting difference. While the group of micros from both municipalities leads in terms of total number of farmers, with an average of 83.5% or equivalent to 357 hectares of total landholdings, they landed almost equal, in terms of landholdings, with that of the large group (3% of total farmers), whose landholdings is equivalent to 308 hectares. The smallest landholding is 0.25 hectares while the biggest is 100 hectares. The largest group in this grouping primarily consists of corporate farms owned by cooperatives, foundations, corporations, and partnerships.



3.1.2 Age, Gender and Civil Status

Rubber farming in both municipalities is seen to be more prevalent and attractive among those in the age group of 61 years old and above. The figure slowly wanes among groupsof51-60 years old and 41-50 years old, respectively. In terms of gender and civil status, an overwhelming majority are married men, while the participationof women in rubber farming has become negligible in terms of number.



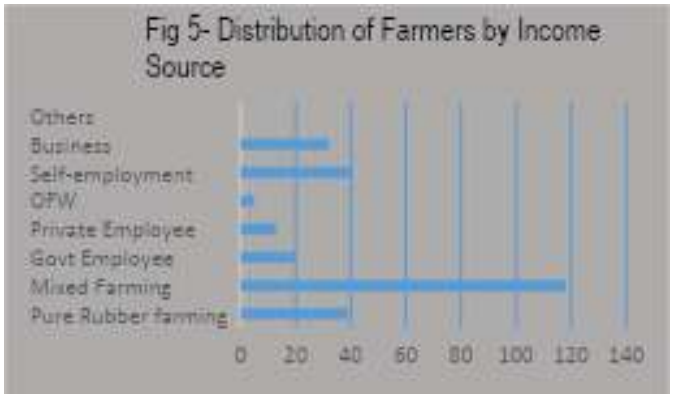


Education

In terms of education, most of the farmers in both study areas are either college-level or high school graduates. It has been found that bigger farms belong to those whose education is college level. A greater portion of farmers in the micro group are either elementary, high school, or not formally educated. Education plays an important part in economic opportunities to support their rubber farming.

3.1.3. Source of Income and Investor Type

Most farmers admitted that they are doing their farming on their own without the benefit of external investments in the form of stocks or loans. They engage in rubber farming even without the support of the local government. They did it with an expectation that rubber farming would improve their standard of living or at least pull them out of poverty. However, some of the respondents belonging to the micro group disclosed that their seedlings were part of the dispersal program of the provincial government. Each family is entitled to a soft loan of 500 PE bags of plantable rubber. Those who cannot afford to buy budded materials, or failed to qualify for the program for whatever reason, resorted to planting just seeds. The practice of planting non-budded seedlings has led to lower production per tree based on their experience.



3.1.4. Corporate Farmers

Farms that are relatively larger in terms of lot size or area, and whose management belongs to a group of persons responsible for decisions and daily management of the plantations, are considered corporate farms regardless of their legal identities. In Quezon, there are four enterprises with this type of investors. This includes Bagong Pag-asa Foundation, JB Group, KB, Inc., and Salleva & Co. Inc. Western Philippines University (WPU), is also located in Quezon, holding and operating 9 hectares of rubber. In the municipality of Rizal, large farms are predominantly owned by individuals who came together and formed informal groups. Such as the case of Filipino-American Adventists who occupy approximately 200 hectares in Barangay Bunog in Rizal and Barangay Quinlogan in Quezon. Palawan State University also has its plantation under SIFMA (Socialized Integrated Forest Management Agreement) in Barangay Culasian in Rizal. They hold more or less 500 hectares, 75 hectares of which are planted with rubber.

3.2. Plantation Profile

3.2.1. Security of Tenure

It was found that rubber plantations in most parts of the study areas are devoid of tenurial instruments to secure ownership of their landholdings. All rubber farms in Rizal are situated in purely timberland areas. This represents 44% of the total landholdings utilized for rubber farming in both municipalities. In Quezon, about 23%, based on the initial interview, hold patents or titles for their farms. The rest of these farmers, mostly the small ones, encounter financial difficulties in applying for and securing special patents for their landholdings.

3.2.2. Age of Plantation

Of the total rubber planted in both Quezon and Rizal municipalities, 55% are 5-10 years old, 21% are 10-15 years, and 21% are 15-20 years. Only 3% are either under 5 years or 25 years and above. Older farms are found

in Quezon, which began its operations approximately 15-20 years ago. About 2% of the total farms are the oldest, planted in Kalatagbak, Quezon. According to the interview data, it was Julian Sampayan, a former rubber plantation manager from Basilan, who brought this into the municipality.

3.2.3. Production Capacity

Out of the 1,297.75 hectares planted in both municipalities, only 48% is producing on a continuous basis. 13% is intermittent, and the rest, accounting for 39%, are said to be dormant or non-productive. These farms have opted not to open their rubber trees for tapping and production due to issues in market prices.

3.3 Production Practices

Production practices such as tapping remain manual, through the use of a tapping knife in extracting the latex from the bark of the rubber tree. Collection is made using coconut shell or a 1.5 liter PE soft drink bottle. Due to difficulties in sourcing manpower, most farms except for owners of 1 hectare or less resorted to 60/40 profit-sharing, where workers receive 40% of the gross output during the day. This practice is common among the small, medium, and large groups. The local rubber industry remains dependent on Mindanao for its tools, skills, and marketing.

3.4. Workers

Working in the rubber plantation is a common opportunity for people in the lower socioeconomic bracket. They are usually the tribal groups who have gained experience and actual tapping lessons from their predecessors and landlords. The same job opportunity is also open to non-indigenous groups, or those who were unable to complete their schooling.. 70% of the farm owners who attended a recent consultation meeting with DTI in Puerto Princesa City reported to have experienced difficulties in hiring and retaining workers.

3.5. Traders, Processors, Haulers and Manufacturers

Below are the traders currently engaged in buying and processing raw rubber into different sizes and shapes according to market specifications:

3.5.1.

Jojo Mulato, with an office in Puerto Princesa City, is an independent trader operating all over Palawan. He ships his trade to Zamboanga for processing prior to selling in his intended market.

3.5.2.

Arol Halon, a farmer and turned agent for a Zamboanga -based processor.

Both of these traders brought their commodity to Zamboanga to be processed before it became available to the intended market.

3.5.3.

Currently, there are small-scale rubber processors operating in Quezon municipality. Bagong Pag-asa

Table 1 Currently Installed Capacities, Daily Basis

Name of Buyer/processor	Output Type	Capacity
B. Sampayan	Pale Crepe	800.00
M.J Dayrit	Pale Crepe	1,200.00
Salleva & Co.	RSS	300.00
Pediapco	RSS	300.00
Charles & Dennis Dugan	RSS	300.00
TOTAL		**2,900.00**

Foundation started its operation in Kalatagbak, Quezon, in 1985, producing RSS (rib-smoked sheets). Brothers Charles and Dennis Dugan started Salleva & Co. in 2008. In 2012. They both produce RSS. Engr. Bernard Sampayan, son of Julian Sampayan, is producing pale crepe with a rated production capacity of 0.5-0.8MT of dry rubber every day. Mary Jennifer Dayrit, who hails from Manila, is producing pale crepe with an installed capacity of 1.2 MT of rubber every day.

3.5.4.

Hauling services can be available anytime as the number of logistics companies in Palawan is gaining upward trajectory. Hauling services are sought by traders at any time depending on needs and price.

3.5.5.

As of the moment, Palawan Rubber Ventures, Inc., a startup company, positions itself to manufacture rubber into EVA sheets for slipper production. Its facility is now under construction to process raw rubber into pale crepe. According to them, the facility will likely operate beginning in 2024, and their slipper manufacturing will begin two years thereafter.

3.6. Potential Regional demand for rubber products

3.6.1.

Palawan: total population of the province, including Princesa City, stands at 1,246,673 with a growth rate of 2.14% for five years.

3.6.2.

307,079, or 24.6% of this, is in Puerto Princesa City, while 939,594 are shared by the 27 municipalities

3.6.3.

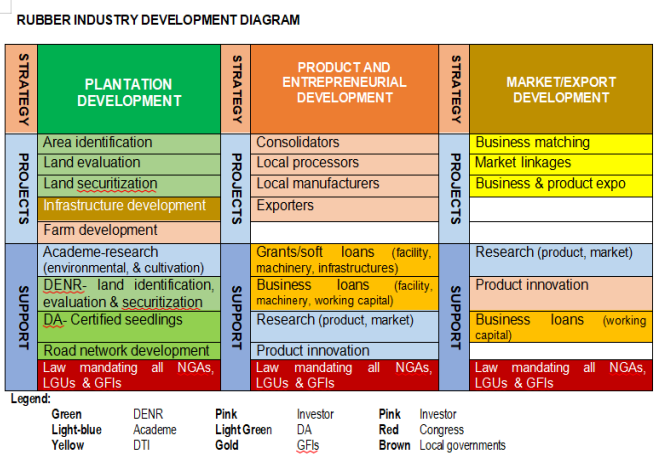
MIMAROPA: According to the 2020 PSA census, the total population of the region stands at 3,228,558, with a positive growth rate of 1.82%, or an increase of 265,198 people from the previous population of 2,963,360 in 2015.

3.7. Support Environment

The Philippine Rubber Research Institute (PRRI) refers to it as the enabling environment *(Philippine Rubber Road Map 2022).* This includes government financing institutions such as the Landbank, the SBC, and DBP. Other enablers would have been the academe, the DA, DTI, DOST, and other agencies of the government. Of all these, the DTI has been consistent for the past three years in providing assistance through trainings to the rubber farmers. GFIs, DOST, SBC, and DTI grant loans based on the financial track record of borrowers of not less than three years. In short, they do not provide loans for startups. According to rubber farmers intending to engage in processing, the guidelines are tedious and very difficult for startups to comply. Some of the farmer groups say that there is a mismatch in the assistance needed by farmers and the assistance provided by the government. Local governments are also reluctant to provide allocations for soft loans and other forms of loan assistance to the rubber sector due to unhealthy market conditions for rubber in the past.

4. CONCLUSION AND RECOMMENDATION

In view of the above discussions, it is concluded that the local rubber industry has not yet harnessed its full potential to generate income and jobs for the community. There is still a huge room for improvement in the segments along the rubber value chain, particularly in the processing, manufacturing, and export sectors. Above all, the industry is in need of support from the government to revitalize the sector by ensuring loan security in the form of a guarantee fund in the absence of land titles. Creating private companies and cooperatives can also be a viable approach to solve the gaps in funding startups.



The authors further recommend that a law be enacted by Congress that will encapsulate the policies to improve the country's rubber industry. The diagram illustrates how this unification of government policies will work.

4Plantation development: as a strategy, this entails tasking the agencies of the government during the initial phase of determining the requirements prior to actual plantation development. In Palawan, where environment protection occupies the most important facet of sustainable development, it becomes more imperative to comply with pertinent laws and other regulations. Under this recommendation, labeled green, the Department of Environment and Natural Resources (DENR) and its appropriate allied agencies, including the Palawan Council for Sustainable Development (PCSD), are tasked to proactively promote and guide the farmers or groups of farmers, including corporate farmers, by means of identifying the area suitable for rubber under existing and applicable laws. The DENR serves the project proponents in a proactive manner by assisting them to secure their lands by issuing appropriate tenurial instruments without so much burden and hassle to farmers, making government policies much friendlier and more accommodating for developers.

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Correlation of Entrepreneurial Competencies and Innovation of Themed Restaurants In CALABARZON Region

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ABSTRACT
Entrepreneurs are forces for economic change because they raise living standards, increase wealth, lower unemployment, and contribute to industrialization and economic progress. For the business to have a competitive advantage. Advancement is essential to every business's survival and is essential to entrepreneurship. The study concentrated on the connection between entrepreneurial competencies and innovation. Entrepreneurial competencies entail different characteristics that involve knowledge, skills, and personality. The only competencies examined in the study had been those related to the seven entrepreneurial competencies, namely strategic, conceptual, opportunity, organizing and leading, relationship, technical, and personal. However, other competencies may have been considered and used to expand on the value of the other competencies and generate more viable outcomes for future study. Innovation is defined as bringing any new problem-solving idea into the generation, acceptance, and implementation of new ideas in the management, marketing, processes, products, or services. Entrepreneurial competencies are useful for mitigating environmental pressures resulting from operational turbulence as the firm drives toward improving innovation outputs. The research study utilized a descriptive-correlational research design. The sampling design was stratified random sampling with a replacement method. Each province had an equal chance of being selected as a respondent. Hence, those provinces that did not meet the target sample were replaced with other respondents. Some themed restaurants were closed due to the pandemic, and some refused to answer. Two hundred seventy-two employees of Themed Restaurant were the primary respondents who answered a total of 66 adapted-modified questionnaires. Based on the result of the study, entrepreneurial competencies, and innovation are positively correlated with one another. With this educational institution, the restaurant business and the government should look into the following variables and include them in future studies to sustain economic activity through entrepreneurship.

Keywords: conceptual, opportunity, organizing and leading, relationship, strategic, technical, personal, themed restaurant

1. INTRODUCTION

The restaurant industry in the Philippines is undergoing rapid transformations driven by several factors, including shifts in the economy, evolving consumer behaviors, and changing standards of living. As these dynamics shape the market, restaurant entrepreneurs are constantly seeking new ways to gain a competitive edge. To stay ahead, many are turning to digitalization, standardization, and improvements in production processes. The adoption of innovative technologies and efficient operational strategies has become a key factor in driving high performance in the industry (Chien & Tsai, 2021). However, for

entrepreneurs to remain resilient and competitive, they must elevate their entrepreneurial competencies, particularly in innovation, to meet the ever-evolving demands of the marketplace. Entrepreneurs play a central role in fostering economic development. Through innovation and the creation of new ventures, they generate wealth, create jobs, and contribute to industrialization and overall economic growth. In doing so, they also help improve living standards. For entrepreneurs to create lasting business value, they must possess a comprehensive set of competencies. These include not only intellectual and managerial skills but also attitudinal and behavioral traits such as creativity, flexibility, and risk-taking. A successful entrepreneur is more than just a business owner; they are visionaries who understand the importance of creativity, persistence, and the ability to take calculated risks while executing effective business strategies. As the business landscape becomes more dynamic, entrepreneurs must continuously develop and refine these competencies. Research has shown that entrepreneurial competencies are essential for driving innovation and adapting to the changing needs of the market. Over the years, entrepreneurship research has become increasingly significant, leading to a revolution in business practices. Scholars and practitioners have recognized that, to thrive in today's competitive environment, entrepreneurs need to embrace continuous learning and keep up with emerging trends (Schneider & Albornoz, 2018). The challenges faced by entrepreneurs in the restaurant industry are multifaceted. One of the primary concerns is hiring competent staff capable of fulfilling the diverse roles within a restaurant. With a highly competitive labor market, it can be difficult for entrepreneurs to find skilled workers who meet their business's needs. In addition, business growth remains a persistent challenge. Entrepreneurs must find ways to innovate and improve their business models to scale successfully. As such, innovation becomes a crucial component for growth, enabling businesses to stay relevant and respond effectively to market changes. Entrepreneurial competencies are deeply tied to the capacity for innovation. The ability to recognize opportunities, generate new ideas, and implement creative solutions requires a blend of leadership, problem-solving, and strategic thinking. This study seeks to explore how entrepreneurial competencies directly influence innovation in the restaurant sector. Specifically, it examines how entrepreneurs can leverage these competencies to drive business success, enhance operational efficiency, and improve customer satisfaction in a highly competitive environment. Entrepreneurship has long been regarded as a key driver of economic and social development. Beyond its economic contributions, entrepreneurship helps address societal needs and create sustainable businesses that benefit local communities. As businesses in the restaurant industry continue to face pressure to differentiate themselves, it becomes increasingly important for entrepreneurs to adopt innovative approaches. Entrepreneurial innovation can involve the development of new products, services, or business models that create value for both the entrepreneur and the customer. Innovation helps businesses stay competitive, and it fosters a culture of continuous improvement. Entrepreneurial competencies are defined as higher-level, improvable traits and skills that enable an entrepreneur to achieve goals by effectively utilizing available resources. These competencies encompass a wide range of qualities, including the ability to think creatively, take calculated risks, and manage both tangible and intangible resources. In the context of the restaurant industry, entrepreneurial competencies such as strategic planning, financial management, and operational efficiency are essential for long-term success (Gümüsaya & Bohnéc, 2018). These competencies empower entrepreneurs to conceptualize new products, launch innovative services, and adapt to shifting market demands. This study aims to assess the role of entrepreneurial competencies in fostering innovation within the restaurant industry. The focus is on the CALABARZON region, an area known for its vibrant food service establishments, ranging from small, family-run businesses to popular themed restaurants. The region attracts a diverse customer base, including both locals and international tourists, presenting unique opportunities and challenges for restaurant entrepreneurs. By examining how entrepreneurial competencies influence innovation in this context, the study seeks to provide valuable insights into how entrepreneurs can enhance their ability to adapt, innovate, and thrive in a highly competitive industry. This research aims to explore the relationship

between entrepreneurial competencies and innovation, focusing on how restaurant entrepreneurs can leverage their skills to drive business success. The findings of this study will contribute to a better understanding of the competencies that are essential for fostering innovation and growth in the restaurant industry, ultimately supporting entrepreneurs in their efforts to remain competitive and sustainable.

2. OBJECTIVES OF THE STUDY

This study evaluates the entrepreneurial competencies and innovation of themed restaurants in the CALABARZON Region.

The study sought specifically to; (1) determine the entrepreneurial competencies in terms of strategic competencies, conceptual competencies, opportunity competencies, organizing and leading competencies, relationship competencies, technical competencies, and personal competencies; (2) assess Entrepreneurial Innovation in terms of marketing innovation, management innovations, process innovations, product innovations, and service innovations; and (3) determine the relationship between entrepreneurial competencies and entrepreneurial innovation.

3. REVIEW OF LITERATURE

3.1. Overview of the Restaurant Industry

The COVID-19 pandemic severely impacted the food service sector due to harsh lockdown measures and the implementation of tight safety and sanitation protocols announced in the Philippines to limit the spread of the virus. In 2020, food service establishments that have met government safety protocols were allowed to reopen at 30% of their seating capacity, with strict hygiene and social distancing measures. The strict measures were taken to advance the economy, foreseeing the downfall after the burden of strict lockdown measures in the country. It was forecasted from 2021 to2026 that a Compound Annual Growth Rate (CAGR) of 4.67% in the Philippines food service market was expected. The food service market in the Philippines is highly driven by the changing value-driven and conscious consumers willing to try new restaurants with a wide range of menu options. The restaurant consumer was interested and delighted with international and local cuisines that cater to increasingly busy lifestyles.

Based on United Nations data, the average age of the population in the Philippines in 2015 was 24.1 years. In 2020, it was expected to be 25.2 years. Most of its population comprises millennials, known to be the biggest spenders and embracing an ever-changing food culture. Most food service players focus on attracting this consumer group in the country.

The food service market in the Philippines strongly prefers westernized food chain brands. Independent and chain restaurants in the Philippines food service market are rapidly growing. It is expected to increase the number of food service establishments in the country. Chained and franchised restaurants are expanding in developing countries like the Philippines to gain higher customer and profit margins (Mordor Intelligence, 2022).

It was also mentioned in the USDA Foreign Agricultural Service report(2017) that the food service industry has been conquered and influenced by independent players in the Philippines; most of which have outlets in stand-alone locations. Local food operators like Jollibee Foods Corporation primes through its wide-ranging portfolio of leading fast-food chains. Other significant players include Golden Arches Dev Corp,

which has the right to operate with the McDonald's brand. Ramcar Inc. handles the operations of Mister Donut, KFC, Pizza Hut, and Sharkey's. Technology innovation was a critical manifestation and improvement for the restaurant industry. The increased internet penetration, quick smartphone access, and simplified e-banking systems have resulted in more online purchases and effective marketing. It has evolved several food outlets toward online portals to enhance online ordering by offering better-quality selection and providing convenience, transparency, and security.

The food service establishment provides food and beverages to customers. It is an organization that provides food, beverages, and services at a specific location. The restaurant industry is diverse, offering customers different food services and menus. There are four major restaurant types. The first type is formal or fine dining, which offers more sophisticated menu offerings and exceptional service. The second type is casual dining, the typical family service wherein the menu varies, and casual dining can be a specialty or theme. The third type of restaurant is fast-casual such as cafés, bistros, and coffeehouses. Moreover, the last one is the quick-service restaurant or the fast-food chain known for quick and easy meals and fast service. The four types of restaurants vary in price structures, service style, atmosphere, and service experience (Chen, 2014).

The food service industry is an essential and growing component of most economies like the Philippines, which offers many opportunities. It was stated in the study of Edward (2013) that the food service industry has the provision of offering food and beverages as meals. It may be purchased and consumed both in and out of the home. The food service industry is classified into two sectors: profit-oriented, which can be a private or commercial sector. Secondly, the cost-oriented, which can be an institutionalized sector. Both of these are vital and growing components of most restaurant economies. The food service industry is changing and keeping up to date with the food innovations and trends in the global market. Restaurants are acknowledging novelty and fusion cuisines. Food innovation includes molecular gastronomy, fusion cuisine, ethnic food choices, and locavore influences. Using organic, indigenous, and locally sourced ingredients is also in demand.

3.2. Themed Restaurants

A themed restaurant provides an important place where a series of attractive signs entice customers. Historical and old artifacts can be a center of attraction for the themed restaurant. Themed restaurants offer their customers far beyond the meal. Its most notable feature is to give the general restaurants a particular theme and create a business atmosphere. The established theme may involve its products in the menu card and type of services. Colors, shapes, and activities also serve as a theme in the restaurant. The theme becomes a stimulus for customers to quickly recognize the characteristics of the restaurant and produce behavior toward the restaurant transformation. The different themes also give entertainment and interaction. In the early and mid-1990s, the themed restaurant concept gained popularity. However, it only lasted for a short period of its popularity when many famous brands were forced to downsize their establishments (Jiang, Cui & Yu, 2022).

Themed restaurant emphasizes the performance and experience of the dining to attract its patrons. It also provided authentic customer experiences that made it unique. Its unique concept and decor excite patrons to explore new food consumption experiences (Ishak et al., 2021). It provides new consumption patterns obtained by the effects of the service environment of the restaurant.

3.3. Entrepreneurial competencies

Competency is a person's fundamental characteristic that results in practical action and superior performance in a job. Entrepreneurs are expected to have the prior and requisite competencies such as outstanding attitude, intellect, behavior, and excellent management leadership to create business value in today's economy.

Entrepreneurial competencies were mentioned in the study of Ataeia et al. (2020) that the intricacy of entrepreneurship systems requires the development of entrepreneurs with definite capabilities and competencies. Entrepreneurial competencies entail valuable personality traits, skills, and knowledge that bring the ability to accomplish through resources. It encompasses accumulated knowledge, traits, attitudes, and skills. From diverse approaches, the concept of entrepreneurial competencies tries to emulate the ability of an entrepreneur to start and grow a venture and successfully identify and combine a variety of resources.

Several researchers have conducted a study about entrepreneurial competencies. These are several competencies part of the study by Chandler and Jansen (1992) opportunity, intensive effort, conceptual, human, political, and technical-functional competencies. Over the years, there have been different studies of entrepreneurial competencies. In the study of Man et al., the understudy competencies are opportunity, relationship, conceptual, organizing, strategic, and commitment. However, Hayton and Kelly (2006) mentioned that innovating, brokering, championing, and sponsoring competencies were included in the study.

3.3.1. Strategic Competencies

A strategic competency allows for openings and opportunities for innovation, business growth, and better abilities and proficiencies from organizational resources. Strategic visualization can affect the presentation and growth stratagems of the business enterprise (Behling & Lenzi, 2017). According to Wigboldus (2009), strategic competencies prepare and equip people and organizations to take positions and move in a highly systematic and organized context. It poses constantly changing challenges to realize its aims. Lacking strategic competencies undermines adapting and understanding such changing environments, leading to marginalization. Aidara et al. (2020) also mentioned that Strategic competence refers to an entrepreneur's capacity to establish viable business strategies. A vision and mission encourage entrepreneurs to strategically plan their decisions and actions, giving their businesses a competitive advantage. The forms of competence enable entrepreneurs to devise clear strategies for their enterprises. Long vision for companies is not easy to find in microenterprises due to their short-term business needs strategies. However, Small business owners do not prioritize creating a long-term and detailed business strategy.

3.3.2. Conceptual Competencies

In the study conducted by Pepple and Enouh (2020), it was stated that conceptual competency is the ability to think out of the box and envision goals and strategies. It also involves the mental ability to manage all of the firm's activities and interests (Mashavira & Chipunza, 2021).

A set of competencies for small businesses is a significant entrepreneurial achievement (Aidara et al., 2020). It is often echoed in the ability to stimulate new thinking patterns and develop new ideas and exceptional concepts. A high degree of conceptual competency supports companies in thriving their projects, taking risks, and creating new companies. This competency helps entrepreneurs make effective decisions and become more creative and innovative in their business endeavors. It enhances enterprise

performance, facilitates business technical skills, and improves networking. It may sometimes require deviation from the standard procedure to achieve the best outcomes.

3.3.3. Opportunity Competencies

This competency is related to the capability of entrepreneurs to seek, develop, and assess high-quality opportunities available in the market. A distinct opportunity prompts entrepreneurs to create organizations and embrace substantial risks to turn these opportunities into positive outcomes (Pepple & Enouh, 2020).

According to Rasmussena et al. (2014), identifying opportunities is an intellectual act, with different individuals playing different roles throughout the entrepreneurial process. Opportunity competencies are challenged by using and utilizing financial capital, physical assets, technological resources, human capital, and organizational resources, which are significant in different enterprises.

3.3.4. Organizing and leading competencies

Entrepreneurs are required to take up several tasks and handle different functional areas, which demand the ability to plan and organize various resources in the organization. It was mentioned in the study by Finn (2021) that intensive connectivity enables the organization to organize entrepreneurship while simultaneously distancing others who do not share the same goals. This more intensive and less intensive connectivity shapes the idea of entrepreneurship and the future ability of actors in the company to organize and participate in entrepreneurial activity. It suggests that monitoring is essential in keeping the firm operating efficiently. Likewise, business owners should monitor their activities to be carried out appropriately. Moreover, the study by Aidara et al. (2020) discussed that owners and managers are expected to take on several roles and manage diverse operational areas. The operations include financial, human, physical, and technical domains. Organizing competency permits micro-entrepreneurs to proficiently organize the company resources for the most refined use by ensuring that the right person accomplishes the necessary work at the right time. Organizing competency stresses the ability of a business enterprise to lead, plan, delegate, and coordinate an immense range of resources. These resources comprise people, technology, equipment and facilities, Information, and money for products and materials. Business performance fails without successfully coordinating limited microbusiness resources. Previous studies discovered that organizational competencies significantly influenced competitive advantage and business performance.

3.3.5. Relationship Competencies

In a study by Esubalewa and Raghurama (2020), relationship competencies include building networks as part of essential attributes. It was stated that relationship competencies look into the cooperation of other people in an organization and are vital (Lopatka, 2021). It demonstrates the ability of an entrepreneur to develop, sustain, and use practical communication skills between individual relationships or group-related interactions based on trust and interaction with all stakeholders of the organization (Aidara et al., 2020). Relationship competencies are the capacity of an entrepreneur to develop, sustain, and use good communication skills between individual relationships or group-related interactions. It is grounded on trust and interaction with all critical stakeholders of the organization. Within the business industry, entrepreneurs are likely to interact and deal with all stakeholders, including purveyors, customers, staff, government officials, and competitors. This competency creates a competitive advantage that leads to business performance.

3.3.6. Technical Competencies

Technical competencies are one of the entrepreneurial competencies that entrepreneurs need to be competent in and have the know-how in the business environment to ensure and enhance their maintainable competitive advantage (Mahadalle & Kaplan, 2017). Technical integration creates a more compliant and efficient organization wherein it also supports the implementation of sustainability across the industrial economy, which the food service industry is part of (Shet & Pereira, 2021). It was mentioned in the study of Shai and Tshwane (2016) that technical skills involve using knowledge or techniques. It achieves particular goals, including knowledge of equipment, work methods, and technologies. The technical competencies are simply the skills and knowledge associated with hospitality work. Technical competencies are concrete, and primarily concerned with things and the skills required by the most significant number of people in an organization because many must perform the technical activities of the business. Employees view technical competencies as the most important, followed by interpersonal competencies.

3.3.7. Personal Competencies

Entrepreneurial competencies are critical to driving business success. As noted by "All Successful Entrepreneurs" (2017), leveraging one's entrepreneurial capabilities is a crucial first step in building a successful business. These competencies lay the foundation for effective business practices and growth. According to Pepple and Eunoh (2020), personal competencies—which encompass key personal qualities and abilities—play a significant role in fostering personal strength and resilience. These competencies are particularly valuable in enhancing an entrepreneur's effectiveness when performing challenging tasks, such as managing and scaling a business. By developing strong personal competencies, entrepreneurs can navigate the complexities of business ownership and improve their ability to lead and innovate.

3.4. Entrepreneurial Innovation

Innovation is crucial for the present competitive context for companies that no company can survive without Muñoza et al. (2022). It also plays an essential role in entrepreneurship. It is defined as bringing any new problem-solving idea into the generation, acceptance, and implementation of new ideas, processes, products, or services (Buhalis, 2016). According to Lee et al. (2021), Innovation forms among various restaurant types and categories introduce practical implications to help owners enhance their brand positioning. Another one is effectively managing the innovation process to achieve a competitive advantage.

Chou et al. (2011) stated that innovation adoption and integration processes are unlike for individuals and organizations. The organization involves external business environments, organizational scales, structures, and attitudes toward innovation. Business innovation is positively connected to resource abundance, innovative belief, and willingness to accept risks. The backgrounds of innovation adoption have surfaced in the other literature, such as adopter features, social networks, environmental and government support, and knowledge about innovation technology. It has been suggested to explain innovation adoption behavior better.

3.4.1. Marketing Innovations

According to Volery (2020), marketing innovation is the application of new marketing practices, including

significant changes and patterns in the design, distribution, promotion, or pricing of a product or service. Marketing innovations in restaurants use social networking sites to endorse the business or customer loyalty programs (Lee et al., 2016).

3.4.2. Management Innovations

Management innovations encompass new and latest methods in a management structure, organization of work, or external relations, such as new ways of establishing internal relationships, directing and authorizing staff, career development, and worker's compensation (Lee et al., 2016). Management innovation comprises the organization's ability and skills to create and implement new management practices, processes and methods, structures, and techniques to improve a company's performance (Yu et al., 2022). Khosravi et al. (2019) also mentioned that management innovation also subsidizes a longer-lasting competitive advantage that is hard to replicate.

3.4.3. Process innovations

Process innovations refer to variations made and created 'behind the scenes to upsurge productivity, efficiency, and effectiveness, such as using new equipment or increased automation. More efficient production methods and new energy sources are also part of process innovations (Lee et al.,2016). Moreover, Product innovation is the acceptance of new or updated significant developments and progress related to production. The definition of methods, procedures, and functional structures, as well as the adoption of changes in the equipment and technologies, support the development of the production organization or process methods and measures (Muñoza et al., 2022).

3.4.4. Product innovations

Product innovations refer to new or significantly improved products such as introducing new materials and resources, intermediate products, and new components (Lee et al., 2016). Product innovation also corresponds assertively to the Introduction of a new good or service.

3.4.5. Service innovations

Service innovation is indispensable for the service enterprise. Service innovation combines technology, business model, knowledge, organization, and demand to improve existing services or radically create new ones incrementally. Customers are the critical ones who can evaluate the newness and value of an offering (Shin & Perdue, 2022).

3.5. Entrepreneurial Competencies and Innovation

The study of Umar et al. (2018) showed that 77% of innovative change as fostered by entrepreneurial competencies indicates a relationship between innovation and the performance of enterprises. It was also revealed that technical competency, strategic competency, and organizing and leading competency were the essential factors in improving innovation in the firms. Moreover, Strategic competency was the significant influence among all entrepreneurial competencies towards innovation in which individuals highly competent in strategic and conceptual thinking lead to innovation behavior. However, it shows that the correlation of opportunity competency, relationship competency, and technical competency to innovative performance is not statistically significant (Mohsinet al., 2017).

Entrepreneurs must have the appropriate competencies to undertake innovative developments and ventures. Micros, small, and medium enterprise (MSME) restaurants must build these competencies by adopting new techniques and changing deep-rooted systems to improve the scale of the business. Further, MSME restaurants are advised to broaden their competencies to move their businesses forward. Business risks must be prepared and left behind in today's borderless global market.

4. METHOD

4.1. Research Design

This research employed a descriptive-correlational study in which the food service employees are assessed on their entrepreneurial competencies and Innovation. This research design attempts to establish a relationship between two or more variables.

4.2.Participants of the Study

In this study, 272 employees of themed restaurants in the CALABARZON region were the survey's primary respondents. The employees were assessed according to their entrepreneurial competencies and innovations. The employees include the rank and file, supervisor, and managerial positions of both the back and front of the house. The following employees were the respondents to represent their entrepreneurial competencies towards innovation. It was not limited to the managers and supervisory level since the rank and file are also part of the operation. Owners have omitted aa respondents so as not to put some bias.

Respondents' percentage distribution regarding the demographic profile. The respondents are 26 to 35 years old, are college graduates, have a field of specialization in culinary, rank and file as a position, and have worked for five years or less at the back of the House.

Regarding age, most respondents are 26-35 years old, with 133 or 48.9 percent frequency distribution. It was followed by 18-25 years old with 112 or 41.2%t, while 19 of the respondents or 7% were 36-45 years old and 5 of the respondents, or 1.8 percent were 46-55 years old. Lastly, only 1.1 percent or three respondents are 56 years old and above. Aged 18 – 25 are on a rendezvous and seeking something and do not have a fixed goal in their career, for they are looking for something that fits in based on their standards. The themed restaurant commonly employs ages 26 – 35 because they are in their prime career. Moreover, those aged 18 – 25 are looking for serious and stable jobs in the restaurant industry.

The sampling technique adopted in this study was the purposive sampling technique. The Locale of the study is Region IV-A, which comprises 5 Provinces. This region is known for having an exciting and wide array of themed restaurants. The list of themed restaurants was sorted from TripAdvisor. A survey qualifier was included in the research questionnaire to ensure that only legitimate themed restaurants and respondents would be part of the survey. A total of 40 themed restaurants in the CALABARZON area were part of the study.

4.3. Data Collection Instrument

The research data was collected using a survey questionnaire which consists of four parts. The

instrument's first page contains the respondents' letters explaining the study's objectives. Ethical considerations such as data privacy and confidentiality were also written.

The first part used the adapted and modified questionnaire from the study of Pepple and Enuoh (2020). It comprised sub-variables such as strategic, conceptual, Relationship, Opportunity, organizing and leading, Relationship, technical, and personal.

The second part assesses the entrepreneurial innovation of the food service establishments in terms of marketing, management, product, process, and service. The questionnaire was adapted from Chou et al. (2020) and Lee et al. (2016) They were also used for additional indicators, including innovative innovation entrepreneurship.
The survey question is a total of 60 statements. It is labeled as 5 (Extremely Likely), 4 (Likely), 3 (Moderately Likely), 2 (Unlikely), and 1 (Extremely Unlikely). A five-point scale was designed to help respondents justify their likelihood perception of their entrepreneurial competencies. As for entrepreneurial innovation, a five-point scale was also designed, labeled 5 (Strongly Agree), 4 (Agree), 3 (Moderately Agree), 2 (Disagree), and 1 (Strongly Disagree).

The statement in the survey questionnaire was partially modified to fit the study's objectives. The final version of the questionnaire underwent content validation. Three industry experts in the field of hospitality reviewed the research instruments and suggested some modifications to the questionnaire.

The result of reliability statistics showed that the computed Cronbach's alpha value of 0.979 to 0.821 signifies that the instrument for entrepreneurial competencies has strong or excellent internal consistency. At the same time, the Innovations obtained a Cronbach's alpha value of 0.0957 to 0.867, which signifies good in the rule of thumb. Thus, this set of questionnaires is considered valid for use.

4.4. Data Gathering Procedure

The data-gathering procedure began by sending a consent letter to participate in the survey. The respondents were notified of the themed restaurant by a formal letter through their Facebook page. After the consent letter was sent, the survey was sent through their official Facebook page or visit their establishments. The respondents were informed of the study's objectives and the significance of the study results. Likewise, the researchers assured them that every aspect of the questionnaire would be treated with the highest degree of confidentiality.

The survey questionnaire was distributed in the different provinces through Google Forms and face-to-face visitation in the different establishments in the region. It was very challenging since some of the establishments declined participation due to the busy operations of the store. One reason why some establishments did not participate is that they needed to seek approval from the management. Restaurants were already closed due to the pandemic, which was not included.

4.5. Data Analysis

Frequency and percentage distribution described the demographic profile in terms of age, educational attainment, field of specialization by subject area, position at work, years of work experience, and department.

Weighted mean and rank were used to determine the entrepreneurial competencies in strategic,

conceptual, relationship, opportunity, organizing and leading, relationship, technical, and personal. Also, weighted mean and rank were used to assess the entrepreneurial innovations in marketing, management, process, product, and service innovations.

The result of the Shapiro-Wilk Test showed that the p-values of all variables are less than 0.05, meaning that the data set was not normally distributed. Therefore, the Kruskal-Wallis test for more than two groups was used as part of the non-parametric tests to determine the significant differences. Likewise, Spearman rho was used to test the significant relationship. All analyses were performed using SPSS version 26.

4.6. Ethical Consideration

The researchers sought permission from the cities that are part of the undertaking. Since there are plans to visit different restaurants, the permission is in line with the safety protocols of each province. The researchers wrote a letter to all the food service establishments that would be part of the survey. The researchers sought Informed consent from the participants that an individual voluntarily participated in the study. The rights of the respondents and the potential risks and harms, the data collection, management and storage conditions, and the right of participants to withdraw from the research were strictly observed.

The confidentiality of participants and data is ensured by using a code system to identify participants and storing all data in a locked cabinet and a password-protected computer for a specified period. The researchers ensured the names of participants were not disclosed and utilized a code system to identify them during data collection, management, analysis, and the writing up of the study. The researchers also sought the approval of the author to use their Published Journal. The request was sent through their email.

5. RESULTS AND DISCUSSION

Table 1
Summary of Entrepreneurial Competencies and Innovation

Indicators		Interpretation	Rank
Entrepreneurial Competencies			
Strategic	4.54	Extremely likely	1
Relationship	4.49	Likely	2.5
Technical	4.49	Likely	2.5
Organizing and Leading	4.47	Likely	4.5
Conceptual	4.47	Likely	4.5
Opportunity	4.45	Likely	6
Personal	4.44	Likely	7
Composite Mean	**4.49**	**Likely**	
Entrepreneurial Innovations			
Marketing	4.52	Strongly Agree	1
Management	4.51	Strongly Agree	2
Process	4.51	Strongly Agree	2
Product	4.51	Strongly Agree	2
Service	4.47	Agree	5
Composite Mean	**4.50**	**Strongly Agree**	

Legend:4.50-5.00=Extremely Likely;3.50-4.49=Likely;2.50-3.49=Moderately Likely;1.50-2.49=Unlikely;1.00-1.49=Extremely Unlikely
Legend:4.50-5.00=Strongly Agree; (SA) 3.50-4.49=Agree; (A) 2.50-3.49=Moderately Agree (MA);1.50- 2.49=Disagree (D);1.00-1.49=Strongly Disagree (SD)

The findings from the study of entrepreneurial competence and innovation in Table 1 offer valuable insights into how themed restaurants in the CALABARZON region are adapting to the challenges posed by the pandemic. The composite mean scores for both entrepreneurial competencies (4.49) and Entrepreneurial Innovation (4.50) suggest that respondents have a strong agreement with the importance of these factors in sustaining and growing their businesses.

The ranking of strategic competency (4.54) as the highest among the six competency areas reflects its critical role in guiding businesses through the uncertain and tumultuous conditions of the pandemic. The COVID-19 crisis forced many restaurants to reassess and realign their strategies to cope with drastic changes in consumer behavior, health regulations, and operational constraints. This implies that restaurant entrepreneurs with strong strategic skills are more likely to survive and thrive because they can quickly adapt to market shifts, set clear objectives, and execute plans to achieve those goals. The strong emphasis on relationships and technical competencies (4.49) further underscores the importance of building and maintaining strong connections with customers, suppliers, and employees. As the restaurant industry faced lockdowns and social distancing measures, maintaining these relationships became crucial for both survival and long-term success. The ability to adapt technologically—whether by adopting online ordering systems or digital marketing strategies—was likely a key factor in helping restaurants remain operational during restrictions. Furthermore, competencies related to organizing and leading (4.47) and conceptual thinking (4.47) also play important roles in managing day-to-day operations and envisioning future growth. Entrepreneurs with strong organizational skills are better equipped to optimize resources and manage shifting operational demands. Conceptual competencies, such as anticipating trends and

understanding market dynamics, are equally important, especially in times of uncertainty when the ability to foresee potential opportunities or threats can be a differentiating factor. The opportunity and personal competencies (4.45 and 4.44, respectively) rank lowest but are still vital. Entrepreneurs with strong opportunity competency can identify emerging market needs or shifts, while personal competencies such as resilience and emotional intelligence allow them to lead with empathy and make informed decisions in stressful times. Both competencies contribute to maintaining motivation and sustaining business operations through adversity.

The composite mean score for entrepreneurial innovations (4.50) highlights the importance of continuous innovation in the restaurant industry. The marketing innovations indicator (4.52) ranked the highest, which is unsurprising given the profound shift in consumer behavior during the pandemic. With in-person dining severely limited or entirely halted for extended periods, restaurants had to quickly pivot to digital channels to maintain visibility and customer engagement. The innovation of delivery services, online ordering platforms, and targeted digital marketing campaigns allowed businesses to reach and retain customers. The significance of marketing innovations also aligns with research indicating that firms that embrace new marketing strategies are more likely to navigate competitive pressures successfully (Najib et al., 2021). With the traditional business model disrupted, restaurants leveraged digital platforms, social media, and influencer marketing to adapt to shifting consumer habits. Given the increased reliance on takeout and delivery, enhancing marketing strategies to emphasize convenience, safety, and quality could be the difference between a restaurant's success or failure. Management innovations (4.51), while important, ranked second to marketing innovations. This may suggest that while process and operational changes are necessary for businesses to function effectively, innovative marketing strategies take precedence in terms of customer acquisition and retention. Still, the implementation of management innovations, such as revising internal processes, optimizing supply chains, and improving health protocols, has been pivotal in ensuring the smooth running of restaurants amidst operational challenges. Process and product innovations (4.51) are also crucial, as businesses are continuously evolving to improve efficiency, reduce costs, and enhance customer satisfaction. The need for innovation in service delivery—such as offering contactless payment, redesigned menus for takeout, or revamped food preparation techniques—has never been greater. Even product innovations, like introducing limited-time menu items or health conscious alternatives, can serve to maintain interest and attract new customers in the face of changing market preferences. However, the service innovation indicator (4.47) received a slightly lower rating, suggesting that while businesses are innovating in their service offerings, the sector has been slower to implement service-related changes compared to other innovation types. This is an area for growth, as service innovations—such as enhancing the customer experience through personalized services, improved customer support, or loyalty programs— are vital in retaining customers and ensuring their long-term patronage. The prominence of strategic competencies and marketing innovations in the results highlights two key pillars of resilience during crises like the pandemic. Strategic competencies are the foundation upon which businesses can withstand external shocks. By having a clear vision, setting adaptable objectives, and continuously refining their strategies, restaurant entrepreneurs can pivot to new business models, find new revenue streams, and stay competitive in an evolving market. Marketing innovations have proven to be indispensable in reaching and engaging customers in a new normal where physical presence is limited. The rapid adoption of digital channels, social media platforms, and delivery apps speaks to the flexibility and creativity needed to engage with a more digitally savvy consumer base. The pandemic has accelerated the adoption of marketing technologies, making it a non-negotiable element for any business seeking to stay relevant.

The strong endorsement of both entrepreneurial competencies and innovations by respondents highlights their critical role in navigating the post-pandemic landscape. The implications for the restaurant

industry in CALABARZON suggest that entrepreneurs who possess strong strategic, marketing, and relationship-building competencies are better positioned to lead their businesses through ongoing challenges. To stay competitive, they must continue to embrace innovations in marketing, processes, and services while maintaining an adaptable and proactive mindset that can respond quickly to changes in the external environment. These findings support a growing body of literature that emphasizes the importance of adaptability, resilience, and innovation in entrepreneurial success.

Table 2

Correlation Between Paired Variables of Foodservice Businesses

Paired Variables	rho-value	p-value	Interpretation
Entrepreneurial Competencies & Entrepreneurial Innovations	0.683**	0.000	Highly Significant

** Correlation is significant at the 0.01 level

Table 2 describes the strong positive correlation between entrepreneurial competencies and innovation, as evidenced by the computed rho-values ranging from 0.683 to 0.821 (p=0.000), underscores a critical aspect of success for themed restaurants. The findings emphasize that innovation is not merely a choice, but a necessity for businesses in the highly competitive and dynamic foodservice industry, particularly in niche sectors like themed dining. In this context, the ability of entrepreneurs to innovate is directly tied to the development and application of their entrepreneurial competencies, which include strategic thinking, risk management, and leadership capabilities.

As themed restaurants rely heavily on distinctive concepts, customer experiences, and creativity to differentiate themselves in the market, innovation plays a central role in their success. Entrepreneurs must possess the requisite competencies to identify new trends, adapt to changing customer preferences, and navigate the complexities of a rapidly evolving business environment. This finding aligns with Wickramaratne et al. (2014), who argued that enhancing the entrepreneurial competencies of owners and managers can significantly foster innovation. Moreover, the study by Umar et al. (2018) further supports the notion that there is a positive and significant relationship between entrepreneurial competencies and innovation, which ultimately leads to greater business success.

In practical terms, SMEs (small and medium-sized enterprises), particularly in the food service sector, must focus on continuously developing their entrepreneurial skills to remain competitive. In today's globalized marketplace, where trends emerge rapidly and customer expectations evolve constantly, businesses that fail to innovate risk being left behind. As such, themed restaurant entrepreneurs are encouraged to broaden their competencies by investing in training, gaining exposure to global best practices, and fostering a culture of creativity within their organizations.

5.1. Theoretical contributions

Innovation plays a pivotal role in shaping the entrepreneurial performance of restaurants, particularly in the competitive food service industry. The findings of this study indicate a strong correlation between entrepreneurial competencies and innovation, demonstrating that the ability to innovate is closely tied to the competencies possessed by entrepreneurs. In this context, the operational performance of restaurants is increasingly driven by their capacity to implement innovative strategies. This finding supports the argument that, in today's competitive market, innovation is not just a differentiator but a

critical factor for the survival and growth of entrepreneurial restaurants. Innovative entrepreneurial restaurants are better equipped to adapt to changing consumer preferences, technological advancements, and market dynamics. The results of this study highlight the importance of fostering entrepreneurial competencies within restaurant organizations. By enhancing the skills and capabilities of restaurant leaders and employees, businesses can more effectively drive innovation, improve service quality, and achieve sustainable growth. This relationship between entrepreneurial competencies and innovation underscores the importance of investing in talent development and continuous learning for those working in the restaurant sector.

Looking forward, the entrepreneurial mindset in hospitality businesses, including restaurants, must evolve to meet the demands of the modern consumer. As pointed out in recent studies, hospitality companies need to move beyond the traditional focus on "worth-in experience" to a more customer-centric approach that emphasizes "worth-in-memory" as a core company strategy. This shift reflects a broader trend in the hospitality industry where emotional engagement and long-lasting impressions are becoming key drivers of customer loyalty. In this regard, the ability to create memorable experiences through innovation is essential.

To achieve this, restaurants must focus on "exhuming" or uncovering new ideas during the innovation process, rather than relying solely on existing practices. Encouraging innovative thinking within the organization and integrating customer feedback into the innovation process can drive more personalized and impactful experiences. Hospitality firms should actively endorse and support innovative activities, creating environments where employees feel empowered to propose and experiment with new ideas. Such a culture of innovation can foster collaboration and co-creation, allowing businesses to better meet the evolving needs and desires of their customers.

The restaurant industry in CALABARZON—an important region in the Philippines—can greatly benefit from ongoing research into entrepreneurship and innovation. Future studies should build on the findings of this research to develop more consistent and comprehensive data about restaurant sector development in the region. By doing so, researchers can provide actionable insights that guide the growth of entrepreneurial restaurants and help establish more robust frameworks for understanding the dynamics of the local restaurant industry. The present study contributes valuable theoretical knowledge by offering fresh insights into the relationship between entrepreneurial competencies and innovation within the restaurant sector. These findings not only add to the academic understanding of how innovation affects entrepreneurial performance but also have practical implications for restaurant managers, particularly in themed restaurants in CALABARZON. The ability to translate entrepreneurial competencies into actionable innovation strategies will be key for these businesses to remain competitive and thrive in an increasingly globalized market.

5.2. Managerial Implications

The findings of this study are crucial for developing competent entrepreneurs, particularly in the context of the restaurant industry. A key takeaway is the importance of providing entrepreneurs with the resources and a supportive environment needed to strengthen their entrepreneurial competencies. These competencies are not only central to driving innovation and business growth but also essential for navigating the challenges of a competitive market. Therefore, the results suggest that educational institutions, business practitioners, and policymakers should work collaboratively to create opportunities for entrepreneurs to develop and refine these competencies. Educational and business development programs should focus on enhancing critical entrepreneurial skills, such as strategic thinking, leadership,

financial management, and innovation. These competencies will equip entrepreneurs with the tools necessary to make informed decisions, identify new opportunities, and adapt to evolving market conditions. In this way, educational institutions and business support organizations can play a pivotal role in fostering an entrepreneurial mindset that is conducive to success in the dynamic restaurant sector.

The findings further suggest that identifying and addressing the key factors that enhance entrepreneurial competencies is advantageous for both the government and non-government sectors. Governments can play a crucial role by designing policies that encourage entrepreneurship, provide access to resources (such as funding and mentorship programs), and create a favorable business climate. Non-government organizations, including industry associations and chambers of commerce, can also contribute by offering specialized training programs, networking opportunities, and support services to help entrepreneurs navigate the complexities of starting and growing a business. By focusing on these crucial factors, the government and non-governmental entities can help entrepreneurs overcome barriers to success, strengthen the overall entrepreneurial ecosystem, and stimulate growth within the restaurant sector.

For themed restaurant managers and staff, the present study provides valuable insights into assessing and enhancing their entrepreneurial competencies. The findings can serve as a benchmark for restaurant managers to evaluate their current competencies, identify areas for improvement, and tailor their professional development efforts accordingly. For instance, if managers identify a gap in their innovation or leadership competencies, they can seek targeted training to address these areas, ultimately improving their ability to drive business success. By assessing their competencies, restaurant managers can also better align their strategies with the unique needs and challenges of the themed restaurant market. The study highlights the importance of adopting entrepreneurial strategies that are not only innovative but also responsive to changing customer preferences and market dynamics. Managers can use the findings to guide their decision-making process, mitigate risks, and implement strategies that enhance operational efficiency, customer satisfaction, and overall business performance.

Furthermore, the study underscores the significance of understanding the challenges and issues faced by entrepreneurs in the restaurant market. As the restaurant industry becomes increasingly competitive, entrepreneurs must be equipped to tackle challenges such as fluctuating customer demand, rising operational costs, and shifting consumer preferences. The ability to assess and address these challenges proactively is an essential competency for restaurant entrepreneurs. This research provides a framework for identifying the key areas where restaurant entrepreneurs should focus their attention, such as market trends, customer engagement, and operational efficiency. By developing these competencies, entrepreneurs can better navigate the complexities of the restaurant industry and position their businesses for long term success.

6. CONCLUSION

The study reveals that strategic competencies rank highest among the entrepreneurial competencies valued in the restaurant business. These competencies are crucial for shaping and aligning the restaurant's mission, vision, and goals, ensuring that all employees are on the same page. A clear strategic direction not only guides daily operations but also drives long-term success in a competitive industry.

Among various forms of innovation, marketing innovation was identified as the most significant. In an increasingly competitive restaurant market, adopting innovative marketing strategies is essential for differentiation and sustained business growth. An aggressive marketing approach, coupled with a focus

on innovation, is key to enhancing the restaurant's visibility and customer engagement.

The study also uncovered notable differences in entrepreneurial competencies across demographic and professional factors. For instance, individuals in the age group of 26 and above exhibited significant differences in conceptual and personal competencies compared to younger employees. Additionally, educational background plays a role in competency differentiation, with college graduates demonstrating significant differences in organizing and leading, technical, and personal competencies. Furthermore, employees' fields of specialization showed varying levels of competency, with differences in conceptual competencies observed between those in tourism-related and non-tourism fields, and in personal competencies between culinary and non-culinary professionals. Interestingly, entrepreneurial technical competencies were more highly rated by employees working in front-of-house roles, particularly those in supervisory positions, compared to those in rank-and-file positions. This highlights the importance of specialized technical knowledge and leadership skills in customer-facing roles within the restaurant business.

Overall, there is a strong positive correlation between entrepreneurial competencies and innovation. This suggests that a restaurant's success in fostering innovation, particularly in marketing, is closely tied to the competency levels of its employees. By investing in developing both entrepreneurial competencies and innovative practices, restaurants in the CALABARZON region can enhance their operational efficiency, customer satisfaction, and overall business performance. This underscores the need for continuous training and development to build competencies that support entrepreneurial innovation and contribute to the long-term success of the restaurant industry in this region.

7. RECOMMENDATIONS

Establish Incubation Centers to Foster Future Entrepreneurs. To cultivate a new generation of entrepreneurs in the restaurant industry, it is essential to create incubation centers that provide access to vital resources, such as training, mentorship, and networking opportunities. These centers can serve as hubs for aspiring restaurant owners, offering them the tools and support needed to launch and sustain successful businesses. By focusing on entrepreneurial skills and innovation, these centers can significantly contribute to the growth of local businesses in the CALABARZON region.

Develop a comprehensive entrepreneurial competency database. A competency database could serve as a foundational tool for improving entrepreneurial training and support programs. This database would assess the current competencies of restaurant entrepreneurs, identifying areas for improvement and guiding the development of targeted training programs. By systematically tracking the skills and competencies of entrepreneurs, the database would help refine existing resources and ensure they are aligned with the evolving needs of the industry. This data-driven approach can also highlight emerging trends and gaps that need to be addressed in future training initiatives.

Government initiatives to support entrepreneurial competencies. Government agencies should recognize the importance of entrepreneurial competencies in the restaurant sector, particularly in regions with rich cultural and historical significance like CALABARZON. Agencies can initiate awareness campaigns to educate entrepreneurs on the value of developing essential business skills and competencies. In addition, government support can include grants, tax incentives, or partnerships to facilitate competency-building programs and foster a supportive ecosystem for restaurant businesses.

Encourage innovation in restaurant businesses. Given the competitive nature of the restaurant industry, businesses must prioritize innovation to remain sustainable and profitable. One area where innovation is needed is in the exploration of new sales channels and knowledge management strategies. This includes utilizing digital platforms for sales, improving information exchange within the business, and adopting more efficient logistics and delivery systems. The Department of Trade and Industry (DTI) can play a pivotal role by hosting forums, workshops, or conferences where restaurant entrepreneurs can explore the latest industry innovations, learn about emerging technologies, and share best practices. Encouraging such exchanges can help businesses stay ahead of market trends and enhance their operational efficiency.

Strengthen entrepreneurial competencies to drive innovation. The study highlights the critical link between entrepreneurial competencies and innovative performance in the restaurant sector. Entrepreneurs must possess the right set of competencies to successfully undertake innovation-driven projects. Restaurant businesses should focus on upgrading their existing systems and fostering a culture of continuous improvement. This includes adopting new technologies, reevaluating traditional operational models, and embracing innovative solutions to address current market challenges. By strengthening their competencies and being open to change, restaurant businesses can improve their long-term sustainability and competitive edge.

Embrace the challenges of a globalized market. In an increasingly globalized market, restaurant businesses must be resilient and adaptable. Embracing industry trends and challenges is essential for staying competitive. Entrepreneurs should remain open to new ideas and be willing to take calculated risks to differentiate themselves in a crowded marketplace. By fostering a mindset of innovation, restaurants can better navigate the uncertainties of the global market and capitalize on emerging opportunities.

Future research opportunities. To gain a deeper understanding of the relationship between entrepreneurial competencies and innovation in the restaurant industry, future studies could consider adopting a longitudinal research methodology. This would allow researchers to measure changes in entrepreneurial competencies over time and provide insights into how these competencies evolve as businesses grow. Additionally, future research could explore other perspectives on entrepreneurial competencies and innovation, perhaps focusing on specific areas such as leadership, financial management, or customer experience.

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PROPOSED AGRICULTURAL COOPERATIVE UMBRELLA FUNDING SCHEME

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The agricultural sector has been one of the hardly-hit by the adverse effects of the global recession above the preceding negative impacts of the Rice Tariffication Law among the farmers in the rice production in the Philippines. With the seemingly antagonistic ramifications of the implementation of the law towards the market competitiveness of local produce as against imported crops, it is of high-time that a reform in the value-chain of production be considered. Prevailing import policies further snatched away opportunities for local producers given their lesser than competitive prices and quality of harvest compared to imported crops. In a country dedicating almost half of its land area for agricultural endeavors (47% of the 30 million hectares of land), it is a must that programs and policies provides forward moving mechanisms with sustainability, productivity and resilience as its end goals. Innovation is key aspect in increasing yield, recalibrating crisis-management, leveraging competition and realigning of agricultural policies towards a more inclusive and lucrative economic segment. It is of urgency that the agricultural sector keeps up with the changes in the environment which include global demand, means of production, transport of goods, competition as well as the mitigation of risks brought by acts of God. On matters of investment and commitment to wealth-generating measures, the government is to direct its priorities to one of the country's most valuable and fundamental economic sector---food production. The Agri-umbrella Funding Scheme is a simplified, more-focused, and pro-farmer mechanism in empowering the agricultural sector by deviating from the "credit-reliantculture" among Filipino farmers towards a more inclusive and empowered countryside progress. The goal of the framework is to convert the government leg of the value-chain into partners through direct investment. The debt dependent approaches in rice production for instance, cater to farmers' funding requirements per crop cycle but to the expense of greater financial risk exposure. The scheme will allow the government to be co-investors of the rice industry thereby sharing with the sector both the returns and risks accompanied in the production. Moreover, the dissolution of intermediaries

to concentrate on empowering the farmers in terms of price management, access to fresh harvest and allocation per demand will be handled proactively thru the mandatory establishment of barangay cooperatives. The Department of Agriculture along with the Philippine Crop Insurance Corporation (PCIC), Cooperative Development Authority (CDA), Department of Finance (DoF) and Government Financial Institutions (GFIs) shall serve as partner agencies of farmers and cooperatives in the capitalization, processing, distribution, security and monitoring of the entire cycle of palay production. The eradication of the intermediaries' access to fresh harvest shall transfer the leverage of income-generation to the rice producers. Increased yield and a more robust local rice market shall augment competition and variety of choices thereby decreasing the opportunities for imported players for better market positioning which will presumptively reduce market prices.

Keywords: agriculture; cooperative; sustainability; productivity; resilience

1. INTRODUCTION

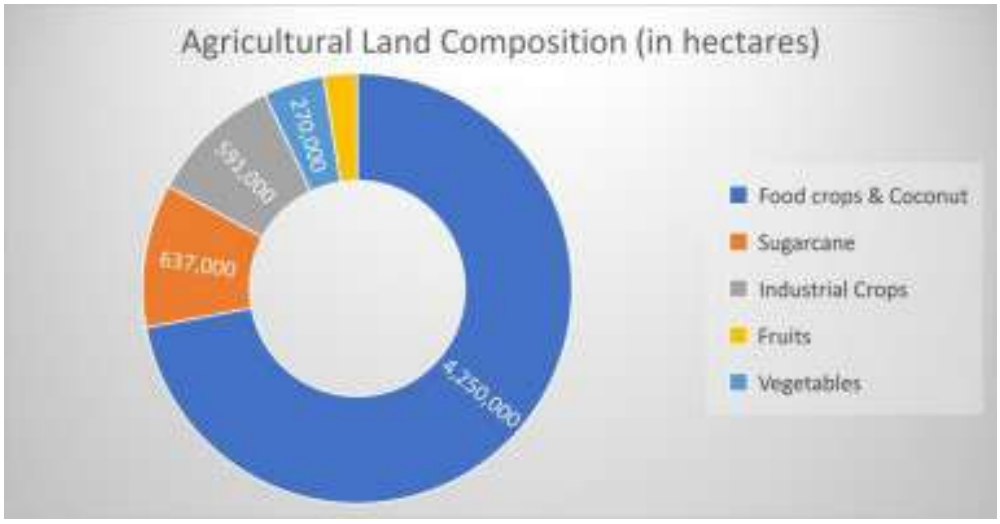
The agricultural sector has been one of the hardly hit by the adverse effects of the COVID-19 pandemic above the preceding negative impacts of the Rice Tariffication Law among the farmers in the rice production industry. With the seemingly antagonistic ramifications of the implementation of the law towards the market competitiveness of local produce as against imported crops, it is of high-time that a reform in the value-chain of production be considered. Prevailing import policies further snatched away a steamrolled field for local producers as market players, given their lesser than competitive prices and quality of harvest.

In a country dedicating almost half of its land area for agricultural endeavors *(47% of the 30 million hectares of land)*, it is a must that programs and policies provides forward moving mechanisms with sustainability, productivity and resilience as its end goals. Innovation is key aspect in increasing yield, recalibrating crisis-management, leveraging competition and realigning of agricultural policies towards a more inclusive and lucrative economic segment. It is of urgency that the agricultural

sector keeps up with the changes in the environment which include global demand, means of production, transport of goods, competition as well as the mitigation of risks brought by *acts of God*.

According to Climate-Smart Agriculture Initiatives in the Philippines, forty-seven percent (or approximately 14 million hectares of the total 30 million land area of the country) of the devoted total land area is comprised of 4.25 million hectares for food crops and coconut; 637 thousand hectares for sugarcane; 591 thousand hectares for industrial crops; 148 thousand hectares for fruits; 270 hectares for vegetables; 404 thousand hectares for pasture and 133 hectares for cut flowers.

Figure 1



The country's Department of Agriculture has been approved a total budget provision of P 184.1 billion for the year 2023, which a P 39.2M increment from its 2022 allocation . The bulk portion of the additional amount will be allocated for the improvement of irrigation services (P 29.5B) and its banner food programs to augment agricultural productivity and strengthen food security.

During the prior year, the Senate approved budget for the department has the following allocations for the banner programs:

- Rice – P15.5 B;
- Corn – P1.5 B;
- High-value crops – P1.6 B;

- Livestock – P1.17 B;
- Fisheries, P3.12 B;
- Organic agriculture – P665 million (M); and
- Halal – P23.9 M. (DA Communications Group, November 2020)

Determining the root of the problem is one vital way to address the insistence of the agricultural dilemma especially experienced by the rice farmers who are the major producers of the country's staple food. **However, the succeeding business model gives a rightful disclaimer that the proposed innovative framework is not a stand-alone & "all-in-formula" to resolve the prevailing rice crisis in the country provided that external factors *(political will*, *social costs*, *financial policies*, *demographics*, *technological needs*, *risk-mitigating measures etc.)* play material roles if not, the most important positions in the fulfillment of the transformative approach in farm production.** Funding requirements, nonetheless, serve as the major prerequisite for supplemental agricultural provisions to be mobilized.

In an article published by Pearlpay.com in March 2020, entitled "Helping Farmers in the Philippines with Accessible Financial Help" they emphasized that Filipino farmers are underpaid and under siege. This was backed by the study made by Bantay Bigas watch group which underscored that, Filipino farmers lose at least P 74.8 billion in 2019 due to low farmgate prices.

Quirino Representative Junie Cua also stated that, "*One of the serious problems besetting our farmers and our fisherfolk is the lack of financing, lack of credit. Why? Because it is costly to lend to small farmers. The cost of lending is very high.*"

2. BACKGROUND OF THE STUDY

On matters of investment and commitment to wealth-generating measures, the government should redirect its priorities to the of the country's most valuable and fundamental economic sector---food production. Capital expenditures are highly-volatile and are heavily reliant on market dynamics and judging
by the Philippine's economic state it cannot afford major losses much less billions of pesos. Investment by nature is never risk-averse and the 19.99 million Filipinos living below the poverty threshold will be hardly hit by major economic downturns if anything goes wrong. Hence, an alternative investment scheme is being proposed

which involves vigorous circulation of funds and visible return on investment thru the 30- 20-10-0 agricultural funding scheme.

Instead of putting "disposable funds" into high capital expenditures which are generally illiquid in nature, like foreign currencies, fixed-income instruments, domestic and foreign corporate bonds, commercial real estate, and infrastructure projects, and the like, the government can focus on placing monetary interests on agricultural engagements. Provided with the debt dependent approaches in rice production for instance, instead of providing loan portfolios to cater farmers' funding requirements per crop cycle, the scheme will allow the government to be co-investors of the rice industry thereby sharing among the sector both the returns and risks accompanying the production. Moreover, the dissolution of intermediaries to concentrate on empowering the farmers in terms of price management, access to fresh harvest and allocation per demand will be handled proactively thru the mandatory establishment of barangay cooperatives. These cooperatives will be overseen by the Cooperative Development Authority (CDA) as the governing body in creating a comprehensive umbrella structure in control of the production, harvesting, pricing and distribution of rice to consumers.

The CDA is the motivated and responsive lead government agency which covers the groundwork of promoting and cultivating growth and sustainability among cooperative members in the means of accessibility and availability of facilities and implements, circulation of funds, network as well as other market opportunities. It is also responsible for formulating inclusive and comprehensive plans and programs in line with the national policy for continuous cooperative development. The agency grants deserving and exemplary-performing cooperatives with various acknowledgements in their own industries.

The Department of Agriculture being on top of the chain and with direct coordination with the DOF and GFIs will be the ultimate policymaking and budget allocating body that will provide all the necessary funding investment in the implementation of the proposed framework. DA has been granting numerous aids and subsidies among local farmers all in the nature of dole-out or credit. (Ex. ACEF, Enhanced KADIWA Financial Grants, Grant-in-Aid, etc.) which portrays a demoralized and dejected representation of the people working under the sector of agriculture. They are deemed an economy of lesser capacity to sustain long-term growth due to

the prevailing dispirited culture of "*pambayad-utang ang aanihin*" which directly translates to "the income from harvest are payment for loans" If the 30-20-10-0 framework is adapted, the government and the people are deemed partners and equals in driving the industry towards a shared goal.

In the micro and local perspective, the DA has committed to embark in the unified goal of instrumentalizing cooperatives as one of the major economic drivers in achieving equity, social justice and

sustainability among small to mega scale enterprises operating under the cooperative sector. For example, the Naujan Multi-Purpose Cooperative (NAMCO) has recently been awarded the Enhanced Kadiwa Financial Grant Assistance Program which aims to augment supplier capacities of farmers and fisherfolks to cater the demands of consumers and sustainably operate the KADIWA retail outlets. Last year, the DA extended P 37.35M of Kadiwa grant benefits to 18 cooperatives, 13 LGUs and six associations from the Western Visayas Region to serve as their trading capital according to DA Western Visayas Agribusiness and Marketing Assistance Division (AMAD) Maria Teresa Solis. Selection of this financial assistance participated in by government units (LGUs), cooperatives, and associations in their trading business, including rice trading.

Nonetheless, the price of rice in the market remained at an almost standstill despite all efforts put together. Inflation is one solid economic undertaking post pandemic, however since the enactment of the Rice Tariffication Law which deflated the competitive leverage of local produce versus imported rice, the agricultural sector has nowhere near recovery after being consecutively hammered by the pandemic, rice importation and persisting inflation.

In the report of Kurt Dela Pena in the Philippine Daily Inquirer published last 2022, she emphasized the insistent negative impact of imported rice to local farmers and even compared it to 'dislocated kneecaps'. It was supported by Jose Vidal's (*a farmer from San Jose, Occidental Mindoro*) testimony to the news outlet to where he stated "We almost have nothing left for us," followed by his aspiration of higher farmgate prices while finger pointing the cause of their crisis---rice importation. With the existing scenario, it is of high time to expand the government interest and involvement by making them major shareholders of the industry that feeds this country.

3. ENTERPRISE /COMPANY DESCRIPTION

The Agri Direct Scheme is a proposition of a simplified, more-focused and pro-farmer mechanism in empowering the agricultural sector by deviating from the "credit-reliant culture" among Filipino farmers. The goal of the proposal is to convert the government leg of the value-chain into stakeholders rather than mere regulators and mediators among affected sectors.

1.1 What does it stand for?

The government will take on the new role of the primary investor instead of creditor. This translates to a **thirty-percent** (30%) government equity investment in the total cost of rice production from planting to processing. Varying equity investment (maximum of 30%) shall only be granted to farmers and landowners who will present reasonable line-item budgets of their capital requirements (inclusive of seeds, farm implements and machineries from planting to harvesting), This list will be double checked in the Registry System for the Basic Sectors in Agriculture (RSBSA).Separate policies regarding the assessment and grants of investments will be standardized by concerned departments after people's consultation and careful analysis of demographic concerns. The Department of Agriculture (DA) and Department of Finance (DF) are the prospected agencies with direct concern for the transition. Small farmers are the priority of the framework whose accumulated land ownership account for <1 HA up to 3 HA *(maximum land area of equity requirement)*. Southeast Asia Regional Center for Graduate Study and Research in Agriculture stated that the average size of farmland in the Philippines which is considered a small-family scale is 1.29 HA.

How will the government secure an ROI after a relatively ramped-up rate of spending? The government will reap earnings based on the amount of equity they invested as contractually agreed upon with the farmers.

How will this apply in case of farmer's inequity?

The framework is a work-in progress which shall initially focus on aiding farmer tenants and crop sharers who don't own the lands they till. The government aside from being investors shall coordinate with Venture Capitalists for fundamental funding. These may include private corporations

and well-off investors that help catapult startup businesses where they see long-term potentials. It is the government's job to reach out to them. Meanwhile, the profit-earning aspect for the VCs usually start at 2% at "seed investment" but this should still undergo careful deliberation among parties involved and within reasonable terms. VCs' support shall be temporary until operations are deemed stable and sustainable.

- Any type of enterprise can be seen as a **two-way** street going in the opposite direction. It is true that stakeholders invest and continuously engage in development practices to increase yield and ultimately, generate returns. Nonetheless, the wholistic approach include mitigating of risks, therefore the security of investments and protection of assets reflects the same degree of importance with that of income generation.
- Farmers shall be secured thru the Philippine Crop Insurance Corporation (PCIC), the primary agency providing insurances to farmers against losses thru calamities, infestations and plant diseases. (pcic.gov.ph)
- Equity investment will be granted on the base value of **every (one)** hectare of farmland. This also represents the **ten percent share** in earnings of the government at the end of every crop cycle. This encompasses the prerequisites from the cost of production to the amount of income therefore, it is expected that equity, cost and income will project varying numbers at the end of every farming cycle. The 1% profit share of the gov't shall be used to invest on intensified agricultural **Research and Development (R&D)** among which is the development of an innovative/digitized monitoring system to keep an eye on integral factors of production like (precipitation, pest control, climate changes, cropping calendar, prospected yield and other management systems). Farmer partners are the immediate recipients of the said improved system of production monitoring.
- Rice production in the Philippines according to the Global Yield Gap Atlas is divided into two seasons annually (the monsoon and summer). Wet-seasoned rice are grown from June-November while dry-seasoned ones

are grown from January June.

- It is important that the government take note of the crop cycles most importantly the harvest seasons so as to evaluate where supplies are most abundant. It is also important to create measures in case typhoons and other acts of God hit the country.
- The ultimate objective of the program is to reduce if not totally eradicate the debt financing dependence of crop production in the country. Initial stages of the mechanism to achieve zero debts among local farmers (especially the tenant and small landowners) focuses on the empowerment of food-producing sector of the economy.
- The government will be the sole market of the rice farmers therefore removing the "upper-hand" from traders and middlemen to fresh produce. The **zero** leverage to negotiate prices for fresh harvest is eliminated from their side of the market but instead are presented with government regulated prices of crops to minimize internal agreements. These crops bought by the government at farmgate prices will be the subject for public bidding among middlemen securing the income of the farmers.
- An increase in market competition among local farmers is also projected which shall presumptively reduce the presence of imported rice at competitive prices in the market.

4. MARKET AND COMPETITIVE ANALYSIS

Tables 1.1, 1.2 and 1.3 shows *EFAS *IFAS and *SFAS as a strategic instrument used to rate a factor's level of importance based on how the industry deems them to be. These methods show the underlying threats which forbid the industry in achieving its goals and the advantages that the field of concern could exploit to improve its value-chain processes. An average performing company is usually rated *1 with a descriptive value of satisfactory indicating a good enough performance. Meanwhile, an overall weighted rating of *3 is the threshold for the overall acceptable strategy applied by the industry.

Table 1.1

EXTERNAL FACTOR ANALYSIS SUMMARY (EFAS TABLE): 3-2-1-0 Agri Direct Scheme				
External Factors	**Weight**	**Rating**	**Weighted Score**	**Remarks**
Opportunities				
Increased market supply	0.15	3.00	0.45	• Investments and subsidies will improve farm yield therefore increasing supply for consumption.
Ramped-up competition among local farmers	0.12	2.50	0.30	• Empowering the agricultural sector shall provide farmers equal opportunities as players of computation
Reduction of imported rice in the market	0.10	3.50	0.35	• Increased supply of food in the market will opt the government to reduce the purchase of overseas crops to fill-in the consumption requirements of the country

Possibility of exporting	0.08	2.00	0.17	• A consistent and more than sufficient production of food will open gateways to global competitiveness.
Threats				
Unprecedented external economic pressures	0.18	3.50	0.63	• Disruption in the conventional industry operations and unplanned economic policies to be implemented
Natural disasters and calamities	0.12	2.00	0.24	• Inadvertent occurrences of typhoons and other *Acts of God* that threatens the quality and amount of harvest
Antagonistic response from middlemen	0.10	3.00	0.30	• Retaliation from specific market players like traders and distributors. Security of farmers in the expense of reducing leverage for middle businessmen
Long-term impact in global trading landscape	0.15	3.50	0.53	• Shift towards a non-conventional agri- scheme may induce unforeseen impacts (whether positive or negative) between trade relations among unions and partners
TOTAL	**1.00**		**3.00**	

Table 1.2

INTERNAL FACTOR ANALYSIS SUMMARY (IFAS TABLE): 3-2-1-0 Agri Direct Scheme

Internal Factors	Weight	Rating	Weighted Score	Remarks
Strengths				
Increased farm yield	0.30	4.00	1.20	• An increase in farm yield translates to increase in income of local farmers
Secured income (cyclical)	0.20	3.75	0.75	• The sector will become a forward-moving industry that is thriving instead of just "surviving"
Empowered agricultural sector	0.15	3.50	0.53	• This would open space for innovative and sustainable agricultural ideas
Weaknesses				
Increased government spending for capitalization	0.15	3.00	0.45	• The new mechanism would require an upsurge in government spending to be allocated for investment. This forges the partnership of government with the farmers provided stake they extended
Transition to new agri mechanism (unpredictable economic consequences)	0.10	2.50	0.25	• Everything new is subject to errors and adjustments therefore, constant improvisations (policy and implementation-wise) must be expected

Table 1.3

STRATEGIC FACTOR ANALYSIS SUMMARY (SFAS TABLE): RESTAURANT INDUSTRY						
	1	2	3	4	DURATION	5
Strategic Factors: Selected important opportunities/threats from EFAS, **Table 1.1** and the most important strenggths and weaknesses from IFAS, **Table 1.2**	**Weight**	**Rating**	**Weighted Score**	**SHORT**	**INTERMEDIATE**	**LONG**	**Remarks**

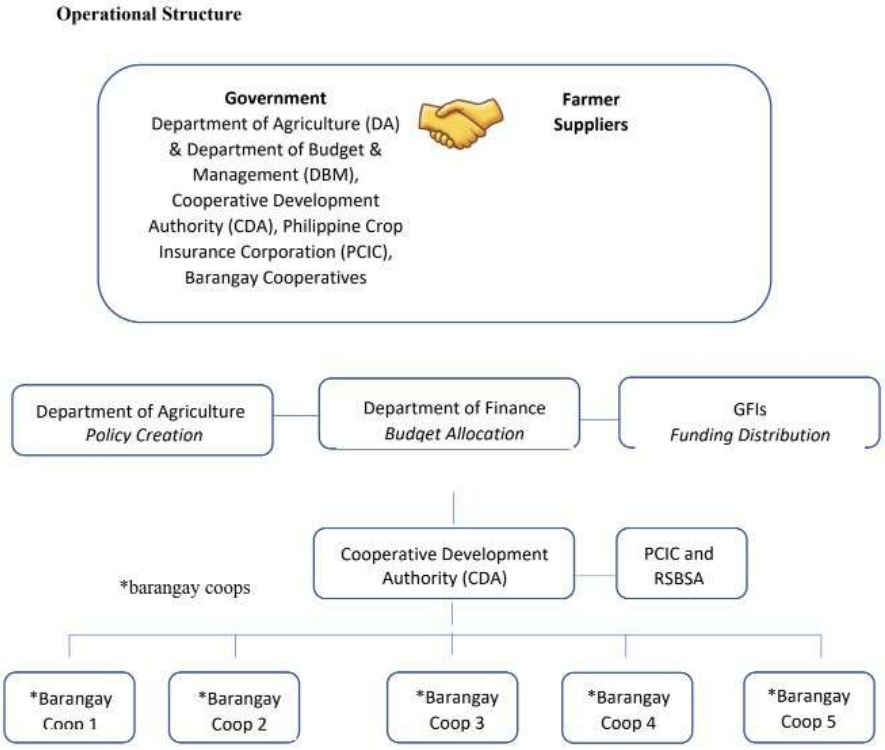
Opportunities							
O1 Increased market supply	0.15	3.00	0.45		X	X	Investments and subsidies will improve farm yield therefore increasing supply for consumption.
O2 Ramped-up competition among local farmers	0.12	2.50	0.30		X	X	Empowering the agricultural sector shall provide farmers equal opportunities as players of computation
O3 Reduction of imported rice in the market	0.10	3.50	0.35		X	X	Increased supply of food in the market will opt the governement to reduce the purchase of overseas crops to fill-in the consumption requirements of the country
T1 Unprecedented external economic pressures	0.18	3.50	0.63		X	X	Disruption in the conventional industry operations and unplanned economic policies to be implemented

	0.15	3.50	0.53			X	Shift towards a non-conventional agri-scheme may induce unforeseen impacts (whether positive or negative) between trade relations among unions and partners
T2 Long-term impact in global trading landscape	0.12	2.00	0.24		X	X	Inadvertent occurrences of typhoons and other *Acts of God* that threatens the quality and amount of harvest
T3 Natural disasters and calamities							
Strengths							
	0.30	4.00	1.20			X	An increase in farm yield translates to increase in income among local farmers
S1 Increased farm yield	0.20	3.75	0.75		X	X	The sector will become a forward-moving industry that is thriving instead of just "surviving"
S2 Secured income (cyclical)							
Weaknesses							

Increased government spending for capitalization	0.15	3.00	0.45	X			The new mechanism would require an upsurge in government spending to be allocated for investment. This forges the partnership of government with the farmers provided stake they extended
Transition to new agri mechanism (unpredictable economic consequences)	0.11	2.50	0.28		X	X	Everything new is subject to errors and adjustments therefore, constant improvisations (policy and implementation-wise) must be expected
TOTAL	**1.36**		**4.58**				

A **4.58** weighted average of the agricultural sector is above **satisfactory** for a **highly fragmented industry due to the leverage granted to intermediaries**. This could translate to an increased level of consciousness among farmer participants and government and willingness to adapt to the non-conventional agri-scheme. The results also reflect how the transformative structure acknowledges both its redeeming and challenging qualities

Figure 2



This envisions a direct partnership between the government and farmers (along with other food producers in the long run) by taking up the role of co-investor sharing among the sector the income and impact of risks. The association shall increase the value of the industry as stakes are divided based on their levels of interest. The simplified value chain eases distribution and reduces channels of distribution that might induce irregularities. Furthermore, all transactions shall be readily available for the public's consumption and scrutiny.

The established barangay cooperatives registered under the CDC shall serve as the immediate market of consumers selling rice at a regulated rate open for retail and wholesale purchases. The agency

having the mandate to perform any means of enterprise, distribution and storage shall maximize its mandate to best fit the network/pathway of control in the distribution of the products.

Financial Analysis and Projections

Table 2 Summary of Line-Item Requirements for Palay Production

ITEM	BASIS/PROCEDURE

Cost of seeds/planting materials	movement of the farmgate price
Irrigation fee	
Lease rental	
Rental value of owned land	movement of the gross value of production per
Landlord's share	hectare quantity used from the survey results
Harvester/thresher/sheller's share	multiplied by the current retail price of fertilizer by grade
Cost of fertilizer	movement of the retail price for selected
Cost of pesticides	pesticides movement of the retail price of
Soil ameliorants	fertilizer
Cost of mulching materials	movement of the retail price of fertilizer
Labor costs (hired, unpaid	number of man days from the survey results multiplied
operator, family and exchange labor	by the current agricultural wage rates
Rentals: Land, Tools, equipment,	
machine and animals	movement of the farmgate price
Food cost	movement of CPI for food
Transport cost	movement of CPI for transport
Fuel and oil	movement of CPI for fuel and oil
Repair cost	movement of CPI for minor repairs
Electricity cost	movement of CPI for light
Interest on crop loans	increase of 10.0 percent per annum
Other production costs	movement of CPI for all items
Depreciation cost	increase of 10.0 percent per annum
Interest on operating capital	based on Average Lending Rates from BSP
Land tax	increase of 1.0 percent per annum

Average cost and profit per hectare of farmland -Palay Production

- P 47, 675 (2021) which increased to P 60,000 as of December 2022 cost per hectare (higher cost during wet season and lower during dry season)
- P 83, 250 gross profit per hectare (lower profit during wet season and higher during dry season as of Dec. 2022)

• P 42,000 net income per hectare (2022) (ROI is approx. P 0.70 for every P1.00 invested) • Average Farmgate price of is at P 16.65 per kilo *(Philippine Statistics Authority, Updated Production Costs and Returns of Agricultural Commodities)*

*If the 30-20-10-0 funding scheme is applied:

Cost
P 47, 675 per HA (2021) **P 60,000** per HA (2022)
(30%) = **P14,302.50** (30%) = **P 18,000.00**
P 14, 302.50 *Gov't Investment* **P 18,000** *Gov't Investment*
P 33, 372.50 *Farmer's Investment* **P 42,000** *Farmer's Investment*

Gross Income
P 83,250.00 per HA
(10%) = **P 8,325.00**
P 8,325 = P 8,325 *Gov't Net Income*
P 56,925= *Farmer's Net Income which is 56.8% higher than their average earnings prior the 3-2-1-0 scheme*

This computation reflects the severely simplified estimates of the Palay production in the Philippines from planting to harvest (exclusive of the seasonal considerations). The study is mindful that other external indicators, methodologies, demographics, prevailing market prices and economic conditions among all others exist that affect the agricultural industry directly and indirectly. Regardless, a streamlined and more transparent approach in the reformation of the agricultural sector is timely and in deemed necessary.

The succeeding table illustrates the production cost of palay and corn in the MIMAROPA region per the 19th edition of "The Production Cost of Palay and Corn" released in annual momentum of the Philippine Statistics Authority (PSA). The publication encompasses three reference years (2019-2021) in its synthesis of findings through research and surveys about the updated costs of agricultural

production at a national and regional level. For the sake of a more cohesive and relevant study, the proposal highlights the immediate locality of the proponent—the MIMAROPA region.

The current assumptions are driven by recent levels of production/yield as well as prices of inputs and implements. The data is categorized by season (wet and dry) and by ecosystem (irrigated and non-irrigated), however the proposal shall provide financial positioning at a presumptive "utopian economics" perspective (*where all things are at a right place regardless of any prevailing circumstances)*.

Supply Chain Framework

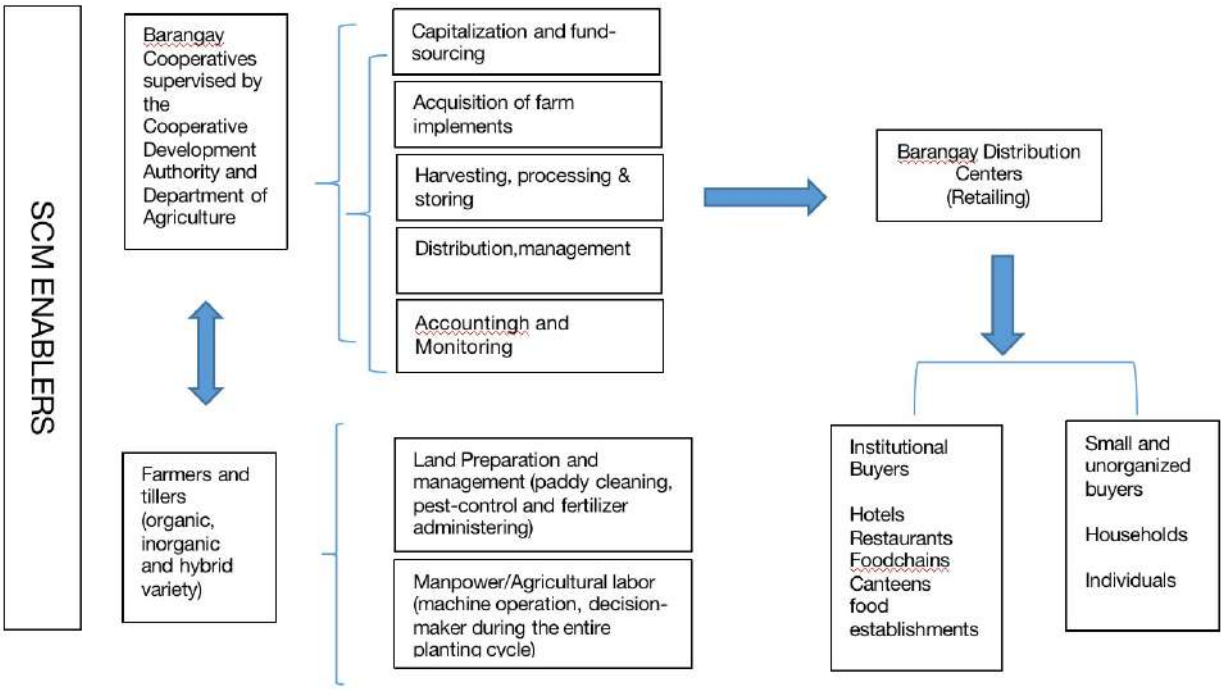


Figure 3

The supply chain framework adapts a prescriptive analytical approach aimed at recommending sectoral decisions, policies, regulations to maximize rice production and inventory performance upon the implementation of the proposed cooperative umbrella.

In congruence with the intention to empower the agricultural sector of the country, specifically the rice producers, the power and authority over fresh harvest are placed on the ands of the local farmers through organized and strictly mandated cooperatives will operate on a barangay level and will spearhead the production from harvest to distribution. Price points and demand allocation will be decided on a communal basis to avoid food waste and indispensable stocks.

Competitive layout

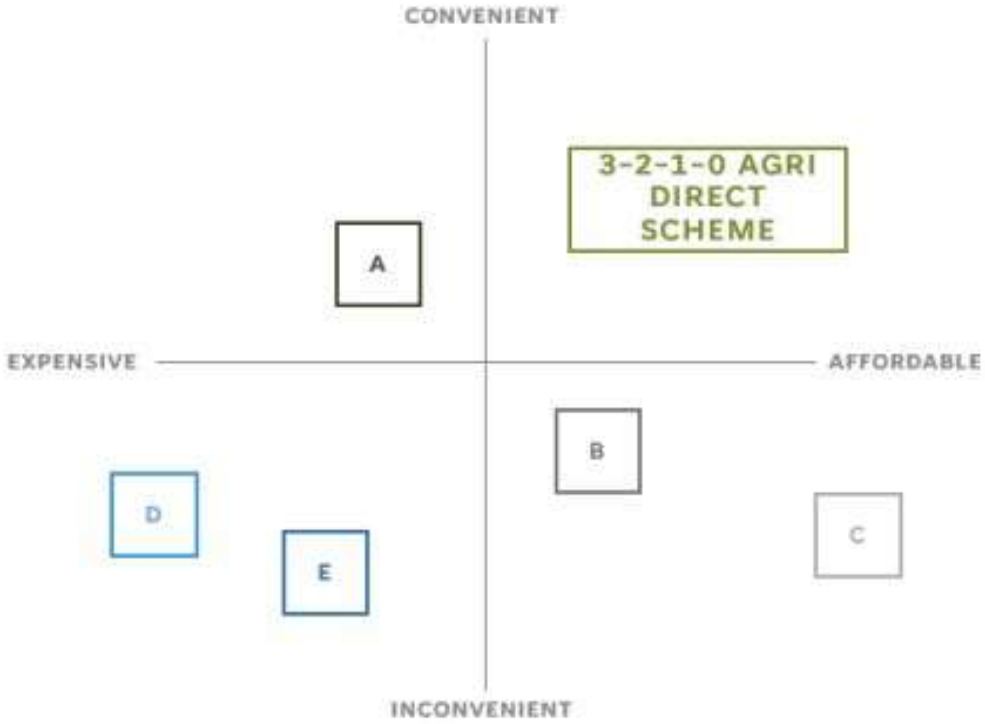


Figure 4

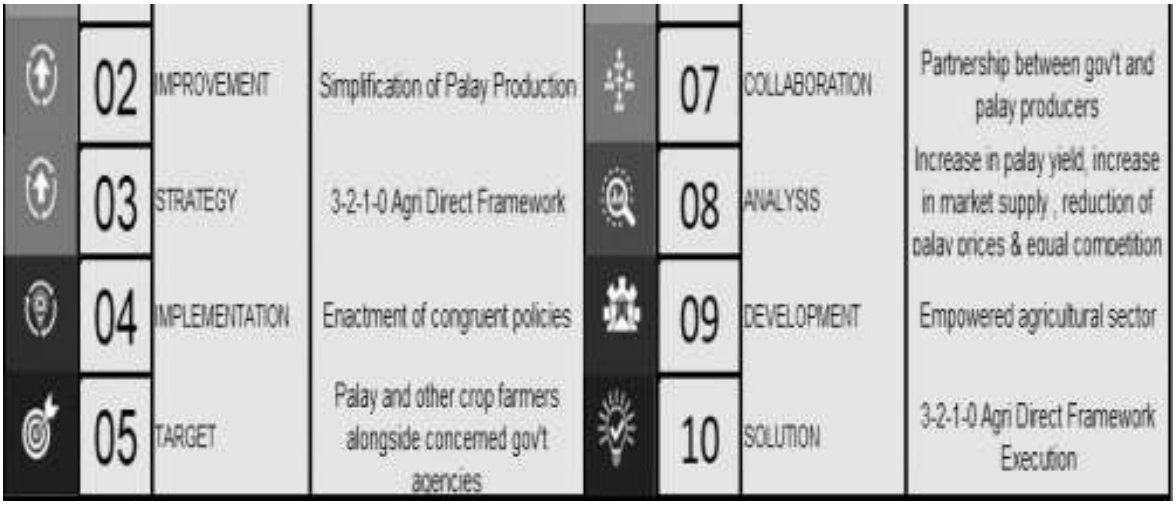


Figure 5

Alternative Financial Framework and Assumptions

In accordance to the Republic Act 821 enacted by the Congress of the Philippines in 1952 which liberalized specially-designed credit facilities to meet the needs of small farmers that was further reinforced by Article 3 of R.A 9520 allowing the effective creation of groupings of farmers through associations on the grounds of : 1) autonomy and registration of duly associated people, 2) common bond of interest, 3) voluntary engagement and 4) fulfillment of social economic, and cultural needs and aspirations, a financial framework already in existence can be adapted into a low-risk credit source for farmers.

In this modified structure, grants and subsidies bestowed on selected performing cooperatives are to be transformed into cooperative assets subject to the association's fund management. Capital formation are indicative of either the success or failure of cooperatives. Past failures zoomed into the poor capital management of the members and what's even worse, the propensity to corruption by the sitting officers were even reported in some cases., Hence the proposition of a more secured and accountable framework through the 30-20-10 Agri-Scheme is brought to the table. It is highly encouraged that capital development should arise from member contributions which in return, will increase friction from access to dole outs.

Dole-outs often result in competition for personal advantages which defeats the primary purpose of increasing individual development and collective influence through joint responsibility.

Furthermore, the number of civil society organizations in existence recognized by the PCIC is less than ten, in Oriental Mindoro. These are: Naujan Multi-Purpose Cooperative (NAMCo), Bansud Livestock MPC, Calapan Labor Service Development Cooperative (CALSEDECO), Sta. Maria Agrarian Reform Community Cooperative, Mansalay Agriculture and Fisheries Development Cooperative (MAFDECO), Bantay Kapayapaan Agricultural Cooperative, Roxas Market Multi-Purpose Cooperative (ROMMCO), Samahan ng Magmamais sa Katimugan Mindoro, and Gloria Sustainable Agricultural Association. It is of high time that the primary economic driver, particularly food production, to work for the people and by the people.

Nevertheless, it is a given that any deviation from a pre-existing culture is like swimming against the current. If subsidies and grants cannot be completely eradicated then, it could be redirected for the benefit of the members. As aforementioned, these government subsidies awarded to deserving efficient associations will be accepted as cooperative assets will then be converted into loanable funds to be lent to members at minimal interests. This will prevent farmers from facing pressures of competitive market rates and risks of repayment failures (non-performing loans).

For instance, President Marcos has recently proclaimed that farmers shall be able to save 25-33 percent in fertilizer cost from the government's P 5,000 fertilizer subsidy. Instead of being given vouchers for specialized subsidies, the government will apportion a certain amount of seed investments to deserving cooperatives until they become financially independent.

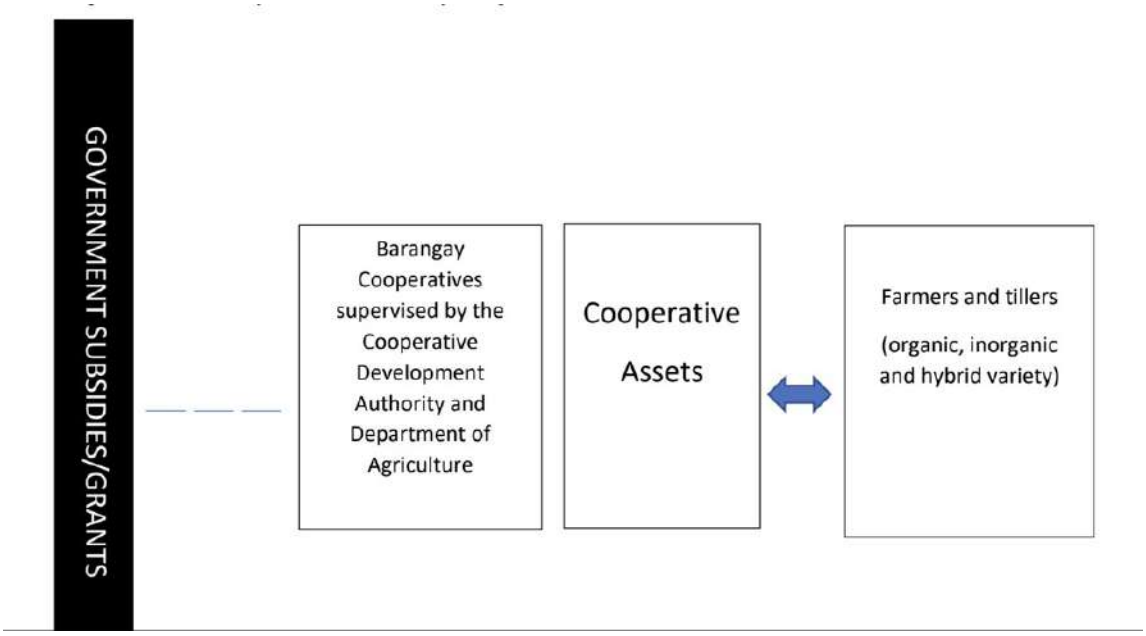


Figure 6

Investment Thesis

- The Department of Agriculture along with the Philippine Crop Insurance Corporation (PCIC), Cooperative Development Authority (CDA), Department of Finance (DoF) and Government Financial Institutions (GFIs) shall serve as partner agencies of farmers and cooperatives in the capitalization, processing, distribution, security and monitoring of the entire cycle of palay production. A proposed cooperative umbrella which will mandate the creation of barangay cooperatives who will have the entire control over their harvest in terms of pricing, marketing and distribution will be implemented. The eradication of the intermediaries' access to fresh harvest shall transfer the leverage of income-generation to the rice producers. Increased yield and a more robust local rice market shall augment competition and variety of choices thereby decreasing the opportunities for imported players for better market positioning which will presumptively reduce market prices. Lastly, the acknowledgement and recognition awarded by the CDC to cooperatives

with exemplary performances in their own industries shall empower its people to strive for continuous development and excellence.

- To guarantee appropriate allocation of funds to rightful recipients, funding and monitoring shall be coursed through enlisted cooperatives and financial facilities who shall be watching over the entire pecuniary and bookkeeping aspects of the production. This is to ensure a well-accounted and efficiently managed financial resources. Furthermore, capital investment shall be awarded in the form of vouchers, exclusively allotted for specific expenditure item.

- The proposal highly encourages the mandate of requiring barangays to establish their own cooperatives to overlook all the value chain processes from land preparation to harvesting to the distribution of rice in the market. There are less than ten operating civil society organizations in Oriental Mindoro according to PCIC, at **least two of which are not devoted for agriculture.** Hence, it is of great significance that the major industry in the province be operating for the people and by the people.

- Government regulation on the provision of micro and small financial assistance from surplus spending units (large distributors) to small farmers in the form of farm credits (e.g loan offering for fertilizer, seeds, pesticides, etc of large enterprises to small farm tenants/owners) should be implemented so as to protect the interests of cooperatives. Furthermore, specialized grants and subsidies shall be transformed into dedicated investments to performing cooperatives chosen on specified criteria.

- Constant updating of records of all performing cooperatives per barangay should be maintained for accurate monitoring of cash flow. Every cooperative is required to submit a line-item budget indicating the cost for production every cycle. This shall ensure that investments are being used accordingly and are not spent on components outside of their proposed budget requirement. Penalties shall be imposed on mismanagement of

funds.

- Necessary amendments shall be considered to address shortcomings and welcome further streamlining for a more sustainable and established agricultural framework. Further and in-depth research about cooperatives shall be done given the very minimal amount of study conducted (as mentioned by CDA MIMAROPA) for understanding this type of organizational framework.

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DISASTER RISK REDUCTION AND MANAGEMENT AND BUSINESS CONTINUITY PLANNING

The Political Economy of Vegetable Oversupply During The Pandemic: The Case Of Cordillera Farmers

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ABSTRACT

The recurring issue of vegetable oversupply, particularly in the Philippines, has highlighted the paradox of food surplus amidst widespread hunger, exacerbated by the COVID-19 pandemic. This paper highlighted a case analysis of vegetable oversupply in the Cordillera Administrative Region (CAR) of the Philippines from 2020 to 2022, focusing on tomato, potato, and carrot oversupply, employing secondary data analysis or intensive desk research. The study examined the issue through the lenses of market and government failures and aimed to provide policy recommendations to address the crisis. The analysis revealed that vegetable oversupply can be attributed to a combination of market and government inefficiencies. Using data from the Philippine Statistics Authority, the study shows a decline in cabbage, garlic, potato, and carrot production in 2021 compared to the previous year. The availability of supply exceeded demand due to the pandemic and distribution disruptions caused by lockdown measures. The analysis found that the causes of vegetable oversupply, as cited in the articles which were analyzed accentuate market failure sources namely information asymmetry, the inability of the private sector to produce public goods, and macroeconomic instability. Drawing from the theories of market and government failures, the study recommended possible interventions such as improved coordination between farmers and agricultural offices, crop programming, dissemination of market information, increasing co-production initiatives, and strengthening fiscal and monetary policies. By addressing these issues, the vegetable oversupply problem can be mitigated, leading to a more efficient and equitable vegetable subsector in the Philippines.

Keywords: co-production, Cordillera farmers, COVID-19, government failure, market failure, oversupply, vegetable oversupply

1. INTRODUCTION

The paradox of food oversupply—particularly regarding vegetables—while people experiencing poverty go hungry has been a regular occurrence in the Philippines since 2020, when the pandemic struck. While these issues can be attributed to supply and distribution disruptions resulting from lockdowns and changing quarantine measures, vegetable oversupply was a recurring problem even before the pandemic. Oversupplies of tomatoes, cabbages, potatoes, and carrots were documented in various parts of Luzon in 2019, with videos of farmers dumping their harvests drawing suggestions from social media users. In September 2022, a Department of Agriculture official blamed farmers for the oversupply of garlic and

cabbage in the Philippines, while traders attributed responsibility to the government to lead crop programming so that farmers in different municipalities are informed about their planting.

In March 2022, our university coproduced a series of agricultural production and food processing training programs with the Department of Agriculture Regional Office 1 for the Balik Probinsya, Bagong Pag-asa recipients in Region 1. Based on this project management experience, processing excess produce can help address food wastage resulting from overproduction and oversupply. However, critical questions remain regarding how to bring these harvests to food processing centers, who will purchase and transport the vegetables, who will finance the processing, and whether a market exists for the finished products. While food processing offers a viable policy solution, institutional nuances within the agricultural sector demand higher-level interventions.

In proposing policy interventions for vegetable oversupply, determining where the problem resides is crucial. Traders and farmers cite the absence of government-led crop programming and the lack of irrigation systems, leading farmers to plant according to seasonal rainfall patterns without information about what other municipalities are growing. Conversely, government officials attribute the issue to farmers' uninformed planting decisions, which result in oversupply and an absence of market channels to absorb the produce. While the government must step up in crop programming and irrigation while addressing information asymmetry, vegetable oversupply can be systematically examined through the lenses of market failure and government failure.

2. CASE ANALYSIS QUESTIONS

This paper presents a case analysis of recurring vegetable oversupply—specifically regarding tomatoes, cabbages, and carrots—in the Cordillera Administrative Region (CAR) from 2020 to 2022. The study examines the issue using the market and government failure frameworks established by Wallis and Dollery (1999) and aims to provide policy recommendations to better respond to such crises. Specifically, this paper answers the central question: "Is the vegetable oversupply a case of market or government failure?" As a corollary, the paper addresses the following sub-questions:

- What makes vegetable oversupply a case of market failure, and what kind of intervention can help address it?
- What makes vegetable oversupply a case of government failure, and what kind of intervention can help address it?

2.1. Case Description

The cases of vegetable oversupply analyzed in this paper were drawn from multiple reports of harvest wastage, where produce was discarded—events widely covered by the media in 2020, 2021, and September 2022. At the onset of COVID-19 lockdowns in April 2020, tons of vegetables—such as carrots,

potatoes, and sayote (chayote)—in the Cordillera Administrative Region were discarded due to a combination of distribution bottlenecks and restrictions under Enhanced Community Quarantine (ECQ) (Ornedo, 2020; Rivas, 2020). A similar incident occurred in September 2021, where vegetables were dumped due to localized supply mismatches. The Secretary of Agriculture advised farmers to coordinate with regional agricultural offices before harvesting to avoid surpluses (Unite, 2021). More recently, oversupply in July 2022 left Benguet farmers struggling with depressed prices amid lower market demand (Locus, 2022). Furthermore, garlic and cabbage oversupplies in Batanes and Benguet in September 2022 were attributed to a lack of coordination between farmers and government agencies, alongside an absence of nationwide crop programming (Gregorio, 2022; Rivera, 2022).

To evaluate the extent of vegetable oversupply, official production data were examined from the 2017–2021 Crops Statistics of the Philippines published by the Philippine Statistics Authority (PSA, 2023). National cabbage production increased by 0.5% between 2017 and 2021, rising from 122.47 thousand metric tons (MT) to 124.49 thousand MT. However, cabbage production declined by 4.1% between 2020 (129.80 thousand MT) and 2021 (124.49 thousand MT). CAR remains the dominant cabbage producer in the Philippines, yielding 95.54 thousand MT in 2021—accounting for 76.7% of total national output—followed by Central Visayas (6.4%) and Northern Mindanao (6.3%) (PSA, 2023). In contrast, national garlic production declined at an average annual rate of 6.5% over the same period, dropping 13.0% from 6.77 thousand MT in 2020 to 5.89 thousand MT in 2021.

Potato production likewise registered a downward trend from 2017 to 2021, falling from 117.64 thousand MT to 103.06 thousand MT at an average annual decline of 3.2%. Between 2020 and 2021, potato output dropped by 9.3% from 113.56 thousand MT to 103.06 thousand MT. The PSA recorded a corresponding reduction in harvested area, from 7.21 thousand hectares in 2020 to 6.55 thousand hectares in 2021. CAR remained the primary potato producer, yielding 84.14 thousand MT (81.6% of national output) in 2021, followed by the Davao Region (11.6%) and Northern Mindanao (5.7%) (PSA, 2023). Meanwhile, carrot production declined at an average annual rate of 0.4% from 2017 to 2021, despite a slight 0.8% increase from 63.53 thousand MT in 2020 to 64.03 thousand MT in 2021.

These crop statistics reveal that while cabbage, garlic, and potato production dropped overall in 2021 compared to 2020, localized oversupply events occurred during seasonal harvest peaks. In 2020, relatively high production combined with sudden pandemic lockdowns led to severe market mismatches. Harvested supply was not matched by consumer demand, largely due to mobility restrictions and transportation disruptions. The subsequent contraction in production volumes and harvested area in 2021 reflects reduced agricultural investments and market uncertainty among farmers.

Rather than reflecting nationwide overproduction, these incidents highlight localized seasonal gluts and distribution failures that exceed individual farmers' capacities to manage. Across the 2020–2022 analysis period, government responses to agricultural supply chain disruptions varied significantly worldwide. In the Philippines, specific market and government inefficiencies exacerbated vegetable losses. Before analyzing these inefficiencies, it is necessary to examine the broader policy and operational constraints shaping the Philippine fruit and vegetable subsector.

To understand the complexity of vegetable oversupply, one must examine the operational constraints within the sector. Briones (2009) categorized these constraints using key terms: price, pests, seeds, institutions, postharvest, marketing, biology, management, weather, breeds, and policies (pp. 15–16). Specifically, price refers to high input costs and low output prices; pests to yield losses from disease and infestations; seeds to insufficient planting materials; institutions to institutional gaps such as capital shortages, lack of market information, poor extension services, inadequate research, and substandard rural infrastructure; postharvest to lacking cold storage and processing facilities; marketing to ineffective distribution strategies; biology to physiological constraints in growth and fruit setting; management to suboptimal farm practices; weather to adverse climatic conditions and flooding; breeds to limited crop varieties; and policies to regulatory constraints in land ownership, subsidies, and taxation (Briones, 2009, pp. 15–16). Analyzing specific commodities, Briones (2009, p. 16) noted that cabbage production is primarily constrained by price and pests; eggplant by postharvest limitations; garlic by seeds, institutions, and postharvest infrastructure; onion by price, pests, and institutions; potato by price and seed quality; and tomato by price, pests, seeds, and biological constraints.

In a quantitative-descriptive study on vegetable supply chains in Nueva Ecija, Fronda (2022) argued that sustaining vegetable production requires prioritizing key operational factors: agricultural inputs, harvesting techniques, handling and storage, transportation vehicles, sales practices, payment arrangements, marketing strategies, and prevailing demand-supply conditions (pp. 24–25). For instance, eggplant farmers in Nueva Ecija utilize a planting calendar to synchronize harvest schedules with market demand to avoid gluts. According to local farmers, oversupply occurs when uncoordinated municipalities plant identical crops simultaneously, causing flooded markets and price collapses during harvest peaks (Fronda, 2022). Consequently, Fronda (2022) emphasized that farmers must recognize their crucial role within the broader supply chain and gain financial literacy and strategic marketing skills to mitigate pricing and distribution risks.

By analyzing these industry constraints, vegetable oversupply can be contextualized within systemic market and government inefficiencies. Oversupply is not an isolated event but rather the cumulative result of institutional, structural, and market failures.

In examining systemic crop gluts, Karl Marx's theory of the crisis of overproduction provides theoretical insights into capital responses to market surplus. Dufalla (2016) applied this framework to explain agricultural trade in the United States and the European Union, illustrating why systemic overproduction and food waste persist despite environmental costs. Applying Marx's framework, Dufalla (2016, pp. 1–2) noted three structural mechanisms used to absorb surplus: destroying productive forces, expanding into new markets, and intensifying exploitation in existing ones. Under this model, large agricultural actors dump surplus or waste excess produce to stabilize market prices while maintaining control over profitable structures (Dufalla, 2016). While this macro-level perspective explains institutional surplus management, it overlooks the specific economic vulnerabilities faced by smallholder farmers in developing economies.

3. CASE ANALYSIS

The present case study investigates the political economy of vegetable oversupply in the Cordillera Administrative Region from 2020 to 2022. To analyze this phenomenon, I utilize the market failure and government failure analytical frameworks established by Wallis and Dollery (1999) in Market Failure, Government Failure, Leadership, and Public Policy. Both frameworks posit that systematic failures justify appropriate state interventions. As Wallis and Dollery (1999) argued, "In essence, the market failure paradigm examines the operation of the economy and prescribes government intervention when markets fail on the grounds of either economic efficiency or equity" (p. 9). Economic efficiency entails deploying scarce productive resources to satisfy consumption needs, serving as a foundational concept in policy analysis (Wallis & Dollery, 1999).

3.1. As a Market Failure

Market failure occurs when essential market conditions are absent, preventing price mechanisms and self-interested market behavior from allocating resources efficiently or generating socially desirable outcomes (Wallis & Dollery, 1999). Under market failure conditions, private markets fail to supply required goods efficiently or distribute resources optimally (Wallis & Dollery, 1999, p. 16). Consequently, market failure theory serves as a normative framework establishing when and how governments ought to intervene (Wallis & Dollery, 1999).

Wallis and Dollery (1999, pp. 16–21) identified six primary sources of market failure: (a) absence or limitation of market competition; (b) positive or negative externalities creating divergence between private and social costs/benefits; (c) inability of private markets to supply public goods; (d) incomplete information or information asymmetry; (e) complete failure of markets to supply demanded goods and services; and (f) macroeconomic instability leading to cyclical unemployment and falling incomes.

Based on news reports, stakeholder accounts, and policy documentation surrounding CAR vegetable oversupplies, the principal sources of market failure are information asymmetry, inability of private markets to supply public goods, and macroeconomic instability. Content analysis of reporting during this period indicates that primary drivers cited by farmers and Department of Agriculture officials included poor inter-agency coordination, lack of harvesting preparation, absence of crop programming, lack of information on regional planting schedules, and reliance on traditional cropping decisions. Table 1 maps these reported causes to their corresponding market failure dimensions.

Table 1. *Matrix of Causes of Vegetable Oversupply and Sources of Market Failure*

Cited Cause of Vegetable Oversupply	Source of Market Failure
Lack of coordination with local agricultural offices	Information asymmetry
Lack of preparation or strategic planning	Information asymmetry
Absence of government-led crop programming	Information asymmetry
Lack of information regarding crops planted in other municipalities	Information asymmetry
Reliance on traditional agricultural practices	Information asymmetry

Lack of irrigation systems for crop diversification	Inability of private markets to produce public goods
Absence of market buyers for harvest surplus	Macroeconomic instability

Table 1 demonstrates that most reported causes of vegetable oversupply stem from information asymmetry. Smallholder farmers lack timely data on regional planting patterns, market demand, and price trends. Consequently, farmers rely on traditional seasonal practices, leading to simultaneous harvesting of identical crops. As Fronda (2022) observed, equipping farmers with real-time market intelligence and structured crop calendars is essential to prevent market gluts and price collapses. Furthermore, private markets fail to provide public goods such as large-scale irrigation infrastructure, which limits farmers' capacity to diversify into non-vegetable crops during peak seasons. Finally, the total absence of commercial buyers during lockdown periods reflects macroeconomic instability, which severely depressed purchasing power and disrupted regional commerce (Wallis & Dollery, 1999).

Although Wallis and Dollery (1999) advocated state intervention to address incomplete information, their framework focuses primarily on consumer protection through product labeling. In agricultural markets, however, information intervention must directly target producers by delivering real-time cropping and pricing data. To address the underprovision of public goods, Wallis and Dollery (1999, p. 19) suggested public-private partnerships or government contracting, such as state-funded construction of rural irrigation networks. Lastly, macroeconomic instability requires supportive fiscal and monetary policies to stabilize aggregate demand during economic downturns (Wallis & Dollery, 1999, p. 20).

3.2. As a Government Failure

From a public choice perspective, government failure manifests through legislative inefficiency, bureaucratic dysfunction, and rent-seeking behavior (Wallis & Dollery, 1999). Weisbrod (1978, as cited in Wallis & Dollery, 1999) proposed a fourfold typology of government failure: legislative failure, administrative (bureaucratic) failure, judicial failure, and enforcement failure. Public choice theory applies microeconomic models to political and administrative decision-making, providing a positive critique of state interventions (Wallis & Dollery, 1999, p. 36).

Legislative failure, also termed policy market failure, involves inefficiencies in lawmaking, such as pork-barrel legislation (allocating public resources to favor special interests) and logrolling (vote-trading arrangements among legislators) (Wallis & Dollery, 1999). In contrast, bureaucratic failure occurs when government agencies experience administrative overextension, wasteful resource allocation, operational inefficiency, or principal-agent disconnects wherein public officials prioritize self-interest over constituent welfare (Wallis & Dollery, 1999, p. 41). Common bureaucratic failure modes include administrative incapacity, inter-agency coordination breakdowns, corruption, and organizational resistance to reform (Wallis & Dollery, 1999). Finally, rent-seeking occurs when private actors seek government regulations or subsidies to capture economic rents (Wallis & Dollery, 1999).

Applying these concepts to the CAR vegetable crisis reveals specific institutional breakdowns. Table 2 categorizes reported operational causes under legislative and bureaucratic failure dimensions.

Table 2. *Matrix of Causes of Vegetable Oversupply and Sources of Government Failure*

Cited Cause of Vegetable Oversupply	Source of Government Failure
Lack of coordination with local agricultural offices	Bureaucratic failure
Lack of preparation or strategic planning	Legislative and bureaucratic failure
Absence of government-led crop programming	Legislative and bureaucratic failure
Lack of information regarding crops planted in other municipalities	Bureaucratic failure
Reliance on traditional agricultural practices	Legislative and bureaucratic failure
Lack of irrigation systems for crop diversification	Legislative and bureaucratic failure
Absence of market buyers for harvest surplus	Bureaucratic failure

As Table 2 indicates, all reported causes of oversupply involve elements of bureaucratic failure, with four factors also containing legislative dimensions. Bureaucratic failure is evident in the Department of Agriculture's historic inability to establish effective local agricultural coordination, crop programming calendars, and extension services. In this context, administrative agencies failed to act in the best interest of their public principals (farmers and consumers). Consequently, agricultural stakeholders must demand administrative accountability and structural agency reforms (Wallis & Dollery, 1999).

4. CONCLUSION AND POLICY RECOMMENDATIONS

This study examined the political economy of vegetable oversupply in the Cordillera Administrative Region during the COVID-19 pandemic (2020–2022). Applying the analytical frameworks of Wallis and Dollery (1999), the investigation identified compound market and government failures as primary drivers of harvest wastage. Market failures were driven by producer information asymmetry, insufficient public goods (irrigation infrastructure), and pandemic-induced macroeconomic instability. Government failures were characterized by bureaucratic coordination breakdowns, administrative inertia, and legislative gaps in statutory crop programming. Addressing recurring vegetable oversupplies requires coordinated policy responses, targeted public investments, and institutional restructuring.

Based on this case analysis, the following policy interventions are recommended:

- **Comprehensive Information Provision:** The Department of Agriculture and Local Government Units (LGUs) must establish digital market information systems and robust agricultural extension programs. Delivering real-time data regarding regional planting schedules, expected harvest volumes, and wholesale prices will enable smallholders to make informed cropping choices.

- **Expanded Coproduction Initiatives:** Government agencies should expand collaborative research and development programs with State Universities and Colleges (SUCs) in CAR. These partnerships can accelerate the deployment of food processing technologies, postharvest handling protocols, and value-adding techniques for excess produce.
- **Targeted Agricultural Infrastructure Investments:** State funding must be prioritized for rural irrigation systems, cold storage facilities, and processing hubs. Enhancing irrigation enables crop diversification, allowing farmers to shift away from vulnerable monocultures during high-risk seasons.
- **Macroeconomic and Market Stabilization Policies:** The national government must deploy targeted fiscal support, such as agricultural emergency funds and transport subsidies, to cushion supply chains during economic shocks and hedge against general inflation.
- **Bureaucratic Rightsizing and Inter-Agency Streamlining:** Institutional channels between the national Department of Agriculture and devolved LGU agriculturists must be restructured to eliminate operational bottlenecks. Streamlining inter-agency communication ensures that crop calendars and policy guidelines are efficiently implemented at the municipal level.

Overall, the recurring vegetable oversupply stems from a combination of market and government failures. Mitigating this challenge requires sustained political commitment, targeted public investments, and institutional coordination across all levels of governance.

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Market environment and entrepreneurial intentions: Implications for the implementation of the Entrepreneurship Program

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ABSTRACT

The Global Entrepreneurship Monitor (2024) reported that, for almost 25 years of assessing the entrepreneurship program, they found out that entrepreneurship education as one of the key indicators, has seen little progress, indicating minimal improvement over the years. According to the Global Entrepreneurship Monitor (2024), the primary weakness of entrepreneurial education lies in the curriculum and its program implementation. In this investigation, the focus centered on the market environment that surrounded the implementation of the entrepreneurship program among higher education institutions. By looking at the market environment, particularly the academe, industry, and government, the study sought to further examine their influences on the youth's intention to pursue entrepreneurship. The issue of how the market environment influences the entrepreneurial intentions of the youth remains unresolved, motivating the researcher to explore this study. The result of the investigation will be used to design an effective program and its implementation. This mixed method research used the Entrepreneurial Intention Questionnaire (EIQ), checklist for best practices of universities and colleges offering entrepreneurship program, and interview in collecting the data from the 289 business students and 62 entrepreneurship educators and administrators across universities in Iloilo City. The mean, standard deviation, t-test for independent samples, one-way analysis of variance, Pearson's r set at .05 alpha level and thematic analysis treatment were used to analyze the data. Results revealed that while the academic current situation of the entrepreneurship program is generally conducive, there are notable deficiencies that the programs appeal to young people. Respondents indicated that while the government provides support for entrepreneurs, access to finance is only moderately provided. Key areas identified by entrepreneurs that need to be improved are the business environment, access to finance, and access to the market. The market environment, along with educational level, school, and entrepreneurial experience, significantly influences youth's intention to pursue entrepreneurship.The findings from this study serve as a guide to enhance the implementation of entrepreneurship program, making it more appealing to young individuals. Only variables that showed significant differences and associations were considered influential and will be integrated into the revised program implementation.

Keywords: Entrepreneurial Intentions; Entrepreneurship; Entrepreneurship Education; Academe Current Situation; Entrepreneurial Start-up Support Needs; Government Provision

1. INTRODUCTION

The Global Entrepreneurship Monitor (2024) reported that over nearly 25 years of assessing entrepreneurship programs worldwide, entrepreneurship education—identified as a key indicator—has seen little progress, showing minimal improvement over the years. Likewise, Velasco and Del Rosario (2013) observed that entrepreneurship education in the Philippines is heavily centered on encouraging students to start their own businesses, a focus reflected across various educational institutions' curricula. They further noted that entrepreneurship programs receive minimal support from both academia and industry. This issue remains prevalent in the current state of entrepreneurship education.

The slow progress in entrepreneurship education is also reflected in the broader economic development of the Philippines. Yeung (2020) noted that approximately 38% of the workforce is self-employed, primarily within the informal sector where many operate small-scale businesses. However, only a few entrepreneurs manage to sustain their ventures and create significant job opportunities for their communities. Moreover, Zhou (2024) reported that 49.7% of businesses fail within their first five years of operation. Additionally, Conchada (2017) pointed out that while the government offers support to individuals with entrepreneurial potential, Filipino entrepreneurs continue to face significant systemic challenges, such as corruption, inadequate infrastructure, and limited access to financial services.

In 2023, the national unemployment rate in the Philippines decreased by 0.40% compared to 2022 figures (Desiderio & Flores, 2023; Laqui, 2023; Rada, 2023). Despite this improvement, a significant portion of the population remains underemployed or unemployed. Fuentes (2024) asserted that many Filipinos are willing to accept jobs that do not match their qualifications, a trend reflected in the country's high underemployment rate. Mendez (2021) affirmed that the large number of Filipinos leaving their families to work overseas indicates a persistent lack of domestic employment opportunities. Overseas Filipino Workers (OFWs) are frequently forced to work abroad due to their desire to secure a better financial future for their families.

The slow adaptation of entrepreneurship education to national economic conditions contrasts with the Filipino Business Hub (2024) report, which highlighted that entrepreneurship in the Philippines is increasingly viewed as a viable career option and a pathway to economic growth, with growing numbers of individuals showing interest in launching businesses. Yeung (2020) concurred that entrepreneurship is a vital mechanism for poverty alleviation in the Philippines.

Although Filipinos recognize that entrepreneurship education can foster an entrepreneurial spirit, programs offered by higher education institutions (HEIs) have not gained significant appeal among youth. Consequently, these academic programs have not translated into a substantial increase in active entrepreneurs nationwide. According to the Global Entrepreneurship Monitor (2024), the primary weaknesses of entrepreneurship education lie in curriculum design and program implementation.

Numerous empirical studies have explored these challenges. Nabi et al. (2021) reported that curriculum quality, experiential learning, and real-world project involvement significantly enhance students' motivation to pursue entrepreneurship.

Pittaway and Cope (2022) examined the effectiveness of experiential learning methods—such as simulations and internships—and found that these hands-on approaches are more effective than traditional theoretical instruction in cultivating an entrepreneurial mindset and practical skills. Similarly, Souitaris et al. (2022) concluded that entrepreneurship education significantly enhances key competencies —such as opportunity recognition and risk management—thereby increasing the likelihood of venture creation after graduation.

In addition, Lindberg et al. (2023) found that curricula incorporating environmental and social sustainability better prepare students to launch sustainable ventures. Hassan (2020) also demonstrated that university support infrastructure, such as business incubators, significantly enhances institutional capacity to accelerate entrepreneurship.

However, previous research has not fully addressed the specific curricular and implementation challenges raised by national entrepreneurship experts, particularly regarding how to adapt programs to practical environmental realities and motivate youth engagement. As a result, effective strategies for implementing entrepreneurship programs that genuinely resonate with young people remain uncertain.

An initial survey conducted by the researcher revealed that university entrepreneurship programs in Iloilo City struggle to attract youth interest. Currently, enrollment in private universities often falls below the minimum threshold required for a single class section, making program sustainability challenging for administrators. Meanwhile, many students in state universities and colleges (SUCs) select the entrepreneurship program primarily due to tuition-free policies; during screening, many express a preference for conventional employment rather than business ownership after graduation, posing challenges for admissions committees seeking intrinsically motivated applicants.

Therefore, this study investigated the market environment—comprising academia, industry, and government—surrounding entrepreneurship program implementation in higher education institutions (HEIs) in Iloilo City. Specifically, it examined how these contextual factors influence youth entrepreneurial intentions, providing an empirical basis for designing more effective entrepreneurship programs and implementation frameworks.

2. METHODOLOGY

2.1. Research Design

A mixed-methods research design was employed in this study, integrating both quantitative and qualitative data. A survey method was used to ascertain the current state of entrepreneurship education, entrepreneurial start-up support needs, and government provisions. Key informant interviews (KIIs) were conducted with school administrators, faculty members, and active entrepreneurs to validate and supplement the quantitative findings.

2.2. Respondents

The study participants comprised 289 youth enrolled in business courses across universities in Iloilo City and 62 faculty members who teach entrepreneurship while actively engaging in entrepreneurial ventures. Youth respondents evaluated their entrepreneurial intentions, perceptions of the academic environment, and awareness of government provisions. Faculty/entrepreneur respondents assessed the academic environment, government provisions, and specific start-up support needs. School administrators were interviewed regarding institutional conditions and program sustainability.

2.3. Sampling Methods

Cluster sampling was employed to select youth enrolled in business courses across universities in Iloilo City, with one representative class sampled per institution. Youth participants were categorized by year level, school, and prior business experience. For faculty/entrepreneur respondents, simple random sampling via the lottery technique was utilized.

2.4. Data Gathering Instruments and Statistical Treatment

Survey instruments were adapted from validated measurement scales in the literature, revalidated, and pilot-tested for this study. The primary instrument evaluated student and faculty perceptions of entrepreneurial intentions, the academic environment, and government provisions. A second instrument assessed the specific start-up support needs of young entrepreneurs.

Items measuring entrepreneurial intentions were derived from the Entrepreneurial Intention Questionnaire (EIQ) by Liñan (2008), Liñan and Chen (2009), and Liñan et al. (2011). These items spanned four construct dimensions: perceived desirability, self-efficacy assessment, propensity for proactive behavior, and triggering events. Evaluations of the academic environment, government provisions, and start-up support needs were aligned with university best-practice checklists established by OECD (2010, 2024).

Quantitative data were tabulated and analyzed using frequency counts, percentages, means, independent-samples t-tests, analysis of variance (ANOVA), and Pearson's r at a .05 significance level. All statistical computations were executed using IBM SPSS Statistics software. Qualitative data from interviews and document reviews were analyzed using thematic analysis.

3. FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

3.1 Major Findings and Conclusions

This section presents the salient findings and conclusions organized by major theme:

3.1.1 Market Environment

The market environment of Iloilo City was evaluated across three core dimensions: the academic environment, government provisions for entrepreneurial support, and entrepreneurial start-up support needs.

Academic Environment. The academic environment was measured across five key indicators: (1) school strategy, (2) financial and human resources, (3) support

infrastructure, (4) entrepreneurship education and start-up support, and (5) evaluation practices. Overall, participants perceived the academic environment as conducive to offering entrepreneurship programs (M = 2.99, SD = 0.52).

However, participants rated specific indicators as only 'moderately conducive.' These included financial support for internal entrepreneurial activities, financial assistance for educator training and development, and laboratory infrastructure for conducting experiments on new product designs.

Comparative analysis revealed divergent perceptions between youth and educator/entrepreneur groups. Youth rated school strategy (providing research incentives, teaching practical technical skills), immersion support infrastructure, start-up networking/private financing access, and business monitoring facilities as 'conducive,' whereas educators/entrepreneurs rated them as only 'moderately conducive.' Conversely, youth viewed financial support for entrepreneurial activities and laboratory infrastructure as 'moderately conducive,' while educators/entrepreneurs considered them 'conducive.' These findings highlight institutional gaps across all five indicators and underscore the need to align perspectives among students, faculty, and industry practitioners. These results align with Hassan (2020), who emphasized that robust incubator and laboratory infrastructure significantly enhances institutional capacity to secure mentorship and investor networking.

Government Provisions. Government provisions were evaluated across five dimensions: (1) business environment, (2) access to finance, (3) management capability, (4) technology, and (5) access to markets. Overall, respondents agreed that government support exists (M = 2.86, SD = 0.55). However, access to finance was rated as only moderately provided (M = 2.72, SD = 0.71), citing insufficient initial capital support, inadequate financial assistance programs, and complex financing applications. Furthermore, provisions to lower freight costs and reduce local/international transportation burdens were rated as moderate. These results align with Conchada (2017), indicating that while government initiatives exist, entrepreneurs still face substantial financial and infrastructural obstacles.

Entrepreneurial Start-up Support Needs. Start-up support needs were assessed across the same five categories. Entrepreneurs indicated lower need for support in management capability (M = 3.14, SD = 0.57) and technology (M = 3.26, SD = 0.54). In contrast, they reported moderate-to-high need for support in business environment streamlining (M = 2.71, SD = 0.70), access to finance (M = 2.59, SD = 0.81), and market access (M = 2.60, SD = 0.66). Specific needs included simplifying registration processes, reducing licensing fees/taxes, lowering loan interest rates, easing credit acquisition, and reducing local/export logistics costs. These findings align with Zhou (2024) and Conchada (2017), reinforcing that bureaucratic complexity and financial barriers remain primary drivers of business failure within five years.

Market Environment SWOT Analysis: The analysis revealed key market dynamics in Iloilo City:

- **Strengths:** Availability of higher education institutions, stable peace and order, proactive local product promotion, and a strong pool of skilled graduates.

- **Weaknesses:** Complex business registration, high local licensing taxes, insufficient start-up capital, high loan interest rates, expensive electricity, and traffic congestion.
- **Opportunities:** Emerging niche markets, growth as a MICE (Meetings, Incentives, Conferences, Exhibitions) hub, and agribusiness expansion.
- **Threats:** Inadequate water supply, frequent flooding, rising raw material costs, and intense regional competition.

3.1.2 Entrepreneurial Intentions of Young People

Overall, youth exhibited high general entrepreneurial intentions (M = 2.96, SD = 0.41), characterized by high perceived desirability (M = 3.17, SD = 0.47), proactive propensity (M = 3.03, SD = 0.59), and positive self-efficacy regarding business organization (M = 2.88, SD = 0.55). However, triggering events were inadequate (M = 2.77, SD = 0.44), resulting in low motivation to enroll in dedicated entrepreneurship degree programs (M = 2.42, SD = 0.89).

Youth displayed moderate specific intentions due to limited encouragement from family, mentors, and peers. They expressed lower confidence in sustaining long-term business viability (M = 2.69, SD = 0.82), perceived deficiencies in project development skills (M = 2.70, SD = 0.69), and limited knowledge of practical business operations (M = 2.75, SD = 0.72). Consequently, starting a business was not prioritized as an immediate post-graduation career choice (M = 2.60, SD = 0.90).

Influence of Personal Factors. Statistical testing confirmed significant differences in entrepreneurial intentions across educational levels, $F(3, 285) = 10.90$, $p < .001$, with fourth-year students displaying stronger intentions than lower-year students. Significant differences were also found based on prior business experience, $t(287) = 5.393$, $p < .001$, and academic institution, $F(6, 282) = 4.656$, $p < .001$. Experiential learning and family exposure significantly enhanced self-efficacy. These findings support West and Dickson (2018), Nabi et al. (2021), Pittaway and Cope (2022), and Souitaris et al. (2022).

Influence of Contextual/Market Environment Factors. Significant positive correlations were established between youth entrepreneurial intentions and the academic environment, $r = .480$, $p < .001$, start-up support needs, $r = .497$, $p < .001$, and government provisions, $r = .379$, $p < .001$. A supportive institutional environment and streamlined regulatory context directly elevate youth entrepreneurial drive.

3.2. Recommendations

To enhance the appeal and effectiveness of entrepreneurship programs, the following strategic actions are recommended:

3.2.1 Improvement of Institutional Strategy

- Establish collaborative interdisciplinary research initiatives bridging business, engineering, science, and technology to foster commercializable innovations.

- Adopt experiential learning models in social entrepreneurship, encouraging faculty and students to solve community challenges through sustainable business models.
- Host community-wide business simulation competitions and youth entrepreneurship expos to generate early interest and spark triggering events.

3.2.2 Financial and Human Resource Allocation

- Re-evaluate faculty compensation and incentive structures, rewarding educators who produce commercialized research or mentor successful start-ups.
- Allocate dedicated funding for faculty development workshops focusing on interactive, digital, and simulation-based teaching methodologies.
- Incorporate industry immersions, start-up coaching, and executive mentorship into educator professional development.

3.2.3 Curriculum Enhancement and Practical Experience

- Revise entrepreneurship curricula to balance marketing, financial management, technical skills, and cross-disciplinary electives (arts, ICT, engineering).
- Mandate a full-year live business venture implementation, allowing students to experience registration, operations, capital management, and financial reporting firsthand.
- Implement job rotation within student venture teams to ensure broad exposure across executive, financial, operational, and marketing roles.
- Develop local case studies and document successful regional entrepreneurs to ground instruction in authentic Philippine business contexts.

3.2.4 Support Infrastructure and Evaluation Systems

- Construct specialized product design laboratories and business incubators equipped with operational facilities and venture funding networks.
- Establish formal annual evaluation frameworks for school facilities, start-up support activities, and faculty instruction, incorporating student and industry feedback.

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Elements Of Disaster Risks And Financing: A Strategic Framework for Sustainable Development of the Micro, Small, & Medium Enterprises In Calabarzon

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ABSTRACT

With disasters presenting potentially severe effects on Philippines MSMEs, there is a need to establish comprehensive and integrated strategies that will help them not only recover, but also ensure resiliency. The paramount challenge for MSMEs after a disaster is lack of resources that may be used to rebuild and sustain business operations. It is imperative that there be a disaster financing scheme that will be available for the MSMEs. This study investigated the disasters experienced by MSMEs and how long it took them to recover from the adverse effects. Further, this study also covered the elements of disaster--hazard, exposure and vulnerability. Most importantly, the study investigated how financial assistance from source organizations influenced the operational factors – capital, labor, supply chain, and sales. Challenges and Opportunities encountered by MSMEs amidst a disaster were also analyzed. Average net income for the majority was low. Disasters experienced included typhoons, flood, volcanic eruption, and earthquake. The average resumption period of normal operations was 6 months to 1 year. All the elements of disaster risk had substantial influence on sales. Financial assistance from source organizations had a moderate influence on capital, labor and supply chain. The most immediate challenge felt by the majority of the respondents after a disaster is loss of sales. In order to take advantage of opportunities, MSMEs need to become agile in meeting the change in customer demands in terms of product and service, as a result of a disaster. A disaster may also present an opportunity for processes to be streamlined. The disaster financing scheme to be designed for the Philippine MSMEs need to serve as an effective tool for taking on those challenges and opportunities.

Keywords: disaster risk, financing, micro small and medium enterprises, strategic framework, sustainable development,

1. INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) face many types of risks that can escalate into disasters. For instance, during the COVID-19 pandemic, numerous businesses were severely affected. Disasters result in the destruction of property, financial loss, economic slowdown, business shutdowns, and even loss of life. When economic vitality is lost and businesses cease to operate, individuals lose their jobs and primary sources of income. The International Labour Organization (ILO, 2021) estimated that approximately 114 million people lost their jobs globally in 2020 due to COVID-19. Furthermore, in 2021, an estimated 23.7 million people were displaced as a result of disasters.

The International Federation of Red Cross and Red Crescent Societies (IFRC, 2020) highlights that individuals, communities, and businesses are frequently unprepared to face or mitigate the adverse effects of disasters. Disasters should be prevented by proactively managing hazards before they trigger catastrophic outcomes. This can be accomplished by training, organizing, and building resilience within local communities and business ecosystems.

The Philippines is highly susceptible to severe natural hazards that exert profound negative economic and financial impacts on both households and business entities. According to Germanwatch (2018), the Philippines consistently ranks among the countries most heavily affected by climate change and extreme weather events. The report notes that the Philippines ranks 4th globally in vulnerability to natural catastrophes. When catastrophes strike, the necessity of having structured risk-mitigation and financial-recovery mechanisms for households and businesses becomes paramount to absorb shocks, ensure indemnification, and expedite post-disaster rehabilitation.

Economic and financial damage is most acutely felt by MSMEs. These enterprises generally operate with limited resources that could otherwise serve as a buffer against severe financial losses, rendering them highly vulnerable. The acute lack of funding was underscored in a report by CNN Philippines (2020), which noted that many Filipino micro-entrepreneurs rely heavily on overseas financial remittances for emergency relief. Many business owners resort to borrowing from family members or informal lenders, including predatory money lenders charging interest rates as high as 20% per month. The report further revealed that in 2018, only 12% of MSMEs accessed formal credit for disaster recovery, whereas 41.2% borrowed money to address immediate operational emergencies.

1.1. Background of the Study

Given the severe potential impacts of disasters, there is an urgent need to establish consistent, comprehensive, and integrated strategies for Philippine MSMEs. Such strategies must ensure prompt access to essential financial resources for recovery and reconstruction following calamitous events, while establishing robust mechanisms for long-term financial protection.

The contribution of MSMEs to global and national economic development is undeniable. Micro, small, and medium enterprises represent 90% of all business entities worldwide, providing 60% to 70% of total employment and generating 50% of global economic output. They offer livelihoods to vulnerable segments of the population who might otherwise face barriers in entering formal corporate employment. According to publication data from the Senate of the Philippines (2020), MSMEs account for 99.5% of all established businesses in the country and generate 62.4% of total domestic employment. Region IV-A (CALABARZON) ranks second nationwide, behind only the National Capital Region (NCR), in its total concentration of MSMEs.

While CALABARZON's MSMEs are vital engines of Philippine economic growth, their vulnerability to disaster risks poses a severe threat to sustainable regional development. Unmitigated disaster impacts can abruptly halt economic progress and erase hard-won social gains. Therefore, formulating a

comprehensive, integrated framework for MSME business resilience is critical to ensure rapid post-disaster recovery and continuous economic growth.

Although existing literature covers crisis management, disaster risk reduction, and general business vulnerability, a significant research gap exists regarding Disaster Risk Financing (DRF) as a core pillar of disaster management frameworks tailored specifically for MSMEs. This study addresses that gap.

Driven by extensive industry exposure in MSME management and strategic consultancy across CALABARZON, the researchers conducted this study to construct an empirical foundation for integrating disaster risk financing into regional MSME development strategies.

1.2. Statement of the Problem

This study examines the elements of disaster risk that impact the operations of micro, small, and medium enterprises (MSMEs) in CALABARZON, with the goal of establishing a comprehensive, integrated strategic framework for recovery, resilience, and long-term sustainability.

Specifically, the study addresses the following research questions:

- What is the demographic and operational profile of MSMEs in CALABARZON that have experienced disasters, in terms of:
- **1.1** Nature of Business (Wholesale/Retail, Accommodation & Food Service, Manufacturing, Financial & Insurance Services, Education);
- **1.2** Business Indicators (Years in Operation, Asset Size, Net Income, Cash Flow);
- **1.3** Types of disaster risks experienced;
- **1.4** Resumption period required to restore normal operations;
- **1.5** Disaster Risk Financing assistance received from: (a) National Government, (b) Local Government Units, (c) Private Organizations, and (d) Civic Organizations?
- **2.** What is the level of influence of the elements of disaster risk—Hazard, Exposure, and Vulnerability—on the operational factors of MSMEs in CALABARZON (Capital, Labor, Supply Chain, and Sales)?
- **3.** What is the level of influence of post-disaster financial assistance provided by source organizations on MSME operational factors (Capital, Labor, Supply Chain, and Sales)?
- **4.** Is there a significant relationship between the profile of MSMEs in CALABARZON and the level of influence of disaster risk elements on their operational factors?
- **5.** Is there a significant relationship between the profile of MSMEs in CALABARZON and the level of influence of financial assistance on their operational factors?
- **6.** What strategic framework can be recommended for the sustainable development and disaster resilience of MSMEs in CALABARZON?

1.3. Review of Related Literature and Studies

Micro, small, and medium enterprises are globally recognized as indispensable drivers of sustainable development. They generate employment, foster innovation, and deliver essential goods and services directly to local communities. In the Philippines, MSMEs fuel local economies and serve as crucial suppliers and distributors for larger commercial enterprises. However, despite their economic importance, systemic mechanisms to support MSME resilience against major disruptions remain underdeveloped.

According to the Philippine Statistics Authority (PSA, 2019), business enterprises in the Philippines are classified by asset size and employment count as follows:

Enterprise Category	Employment Range	Asset Size (PHP)
Micro Enterprise	1 – 9 employees	Up to ₱3,000,000
Small Enterprise	10 – 99 employees	₱3,000,001 – ₱15,000,000
Medium Enterprise	100 – 199 employees	₱15,000,001 – ₱100,000,000
Large Enterprise	200+ employees	₱100,000,001 and above

PSA data (2019) indicated a national total of 995,745 registered MSMEs, of which 148,017 (14.86%) were located in Region IV-A (CALABARZON). Republic Act No. 6977, known as the Magna Carta for Small Enterprises (later expanded to include micro enterprises), established the Small and Medium Enterprise Development (SMED) Council. The law mandates government support programs designed to strengthen MSME competitiveness, resilience, and sustainability by:

- Providing technical manpower development and vocational skills training;
- Facilitating connections between MSMEs and formal financial institutions to enhance credit access;
- Enhancing MSME eligibility to participate in public sector procurement and government contracts;
- Establishing non-collateralized and soft-loan financing schemes tailored for small business owners;
- Instituting regulatory safeguards to maintain financial delivery system stability;
- Fostering linkages between MSMEs and large enterprise supply networks; and
- Establishing comprehensive monitoring mechanisms to evaluate economic contributions alongside environmental compliance.

1.3.1 Vulnerability of MSMEs to Disasters

Following severe urban flooding in Chennai, India, in 2015, KPMG (2015) published a evaluation of MSME vulnerability and recovery efforts. The study highlighted widespread lack of disaster preparedness and identified three primary areas of impact:

- **1.** Infrastructure Damage: Physical destruction of premises and machinery causes prolonged operational shutdowns. Insufficient property insurance frequently threatens enterprise survival due to permanent customer loss during closure.
- **2.** Business Continuity Disruptions: Destruction of raw materials, work-in-progress, and finished inventory prevents order fulfillment, forcing clients to permanently migrate to competitor networks.
- **3.** Employee Health and Safety: Emergency evacuations, post-disaster waterborne illnesses (e.g., leptospirosis, cholera, dengue), and financial distress severely impair workforce productivity.

As Navarro (2020) noted, MSMEs are inherently more vulnerable to disasters than larger corporate counterparts due to operational informality, constrained cash reserves, and limited market reach. Furthermore, Ballesteros and Domingo (2015) reported that Philippine MSMEs rarely maintain formal contingency plans: approximately 61.52% operate without any Business Continuity Plan (BCP), 20.03% have BCPs in draft form, and only 18.45% maintain operational BCPs.

1.3.2. Disaster Risk Financing Frameworks

The Financial Protection Forum (2020) defines Disaster Risk Financing (DRF) as an evolving discipline focused on mitigating the fiscal impacts and economic shocks of natural hazards. According to Juswanto and Suryo (2017), DRF frameworks protect national and enterprise economic gains by integrating pre-disaster risk retention/transfer tools with post-disaster liquidity support. Ozaki (2016) emphasized that effective DRF schemes must evaluate hazard nature, occurrence probability, and potential asset loss. Lucas (2015) observed that formal disaster insurance penetration across the Pacific region remains exceptionally low due to high premium costs, inadequate building registries, lack of actuarial data, and low consumer awareness.

2. RESEARCH FRAMEWORK AND METHODOLOGY

2.1. Operational Framework

This study is anchored on the relationship between MSME profiles (independent variables: nature of business, business indicators, disaster risk types experienced, operational resumption period, and disaster financing schemes received) and operational factors (dependent variables: capital, labor, supply chain, and sales) as influenced by the core elements of disaster risk (hazard, exposure, vulnerability).

2.2 Conceptual Framework

The conceptual framework illustrates the interaction between enterprise profile variables, post-disaster financial assistance sources (national government, LGUs, private entities, civic organizations), disaster risk elements, and operational impact dimensions, driving toward sustainable MSME business resiliency.

CONCEPTUAL FRAMEWORK SUMMARY
• Input: MSME Profile (Nature of Business, Business Indicators, Disaster Risks Experienced, Resumption Period, Financial Assistance Schemes)
• Moderating/Influencing Factors: Elements of Disaster Risk (Hazard, Exposure, Vulnerability) & Financial Assistance Sources (National Govt, LGU, Private, Civic)
• Output: Operational Resilience across Capital, Labor, Supply Chain, and Sales -> Sustainable Business Resiliency

2.3 Theoretical Framework

The theoretical framework integrates DRF principles with operational management across four key dimensions:

- Capital: Physical asset destruction and loss of capital liquidity create severe financial strain and impair rehabilitation.
- Labor: Health hazards, injury, displacement, and psychological trauma reduce worker productivity and operational capacity.
- Supply Chain: Logistics network disruptions impair raw material sourcing, production, and finished-goods distribution.
- Sales: Operational downtime and customer attrition yield acute short-term and lingering long-term revenue declines.

2.4 Research Hypotheses

The study tested the following null hypotheses at a 0.05 level of significance:

- H01: There is no significant relationship between the profile of MSMEs in CALABARZON and the level of influence of disaster risk elements (hazard, exposure, vulnerability) on their operational factors (capital, labor, supply chain, sales).
- H02: There is no significant relationship between the profile of MSMEs in CALABARZON and the level of influence of post-disaster financial assistance on their operational factors (capital, labor, supply chain, sales).

2.5 Methods of Data Gathering and Analysis

A structured survey was administered to N = 140 MSME owners, managers, and operators across CALABARZON. Quantitative data were analyzed using descriptive statistics (frequencies, percentages, weighted means, standard deviations) to measure operational impact. Pearson product-moment correlation analysis was performed to test hypotheses regarding profile variables and operational risk/financial influence levels.

3. DISCUSSION OF RESULTS

Sample Demographic Profile: Of the 140 sampled respondents, 55% (n = 77) reported asset sizes of ₱3,000,001 to ₱15,000,000 (Small Enterprises); 20% (n = 28) maintained assets below ₱3,000,000 (Micro Enterprises); 15% (n = 21) reported assets of ₱100,000,001 and above (Large Enterprises); and 10% (n = 14) reported assets between ₱15,000,001 and ₱100,000,000 (Medium Enterprises). Sectorally, 40% (n = 56) operated in Wholesale/Retail, 40% (n = 56) in Accommodation and Food Service, and 20% (n = 28) across Manufacturing and combined services. Regarding enterprise longevity, 55% (n = 77) had been operating for over 10 years, 35% (n = 49) for 5 to 10 years, and 10% (n = 14) for 1 to 5 years.

Financial Indicators: A majority of respondents (55%, n = 77) generated average annual net income between ₱500,001 and ₱5,000,000; 25% (n = 35) earned ₱500,000 or less; and 20% (n = 28) earned ₱10,000,001 or above. Cash flow patterns reflected similar distributions, indicating low cash reserve buffers across most MSMEs.

Disaster Experience and Resumption: All respondents reported experiencing multiple, concurrent disaster types (typhoons, floods, volcanic ashfall, earthquakes). Notably, 45% (n = 63) required 6 months to 1 year to resume normal operations, while 40% (n = 56) required over 1 year. Only 10% restored operations within 1 month, and 5% within 1 to 6 months. Extended operational downtime severely threatens enterprise survival due to compounding cash flow deficits.

3.1 Influence of Disaster Risk Elements on Operational Factors

The influence of risk elements across operational factors yielded distinct statistical patterns:

- Hazard: Exhibited minimal influence on Capital (M = 1.78), moderate influence on Labor (M = 2.95) and Supply Chain (M = 3.05), and substantial influence on Sales (M = 3.87; Grand Mean = 2.91).
- Exposure: Exhibited minimal influence on Capital (M = 2.01), moderate influence on Labor (M = 3.25), and substantial influence on both Supply Chain (M = 3.33) and Sales (M = 3.89; Grand Mean = 3.12).

- Vulnerability: Exhibited minimal influence on Capital (M = 1.95), moderate influence on Labor (M = 3.10) and Supply Chain (M = 3.03), and substantial influence on Sales (M = 3.59; Grand Mean = 3.92).

3.2 Post-Disaster Challenges and Opportunities

Respondents ranked post-disaster operational challenges and strategic opportunities as summarized below:

Table 2. Ranking of Post-Disaster Operational Challenges

Rank	Operational Challenge Description
1	Decrease in overall sales revenue
2	Decrease or total loss of net income
3	Diminished employee capacity due to illness, injury, or displacement
4	Reduction in total available workforce/manpower
5	Decrease or loss of access to raw material supply chains
6	Depletion of liquid capital (cash and cash equivalents)
7	Increase in unit prices of operational inputs
8	Deterioration in the quality of raw inputs
9	Decline in capital value of real property
10	Decline in capital value of plant, property, and equipment (PPE)

Table 3. Ranking of Post-Disaster Strategic Opportunities

Rank	Strategic Opportunity Description
1	Pivoting product lines to meet emergency and recovery consumer demands
2	Providing specialized services required for post-disaster rehabilitation
3	Streamlining internal operating procedures to enhance efficiency
4	Establishing alternative supply chain partners offering flexible terms

5	Developing innovative new goods and business delivery models

4. SUMMARY AND CONCLUSION

The findings empirically demonstrate that MSMEs in CALABARZON experience severe operational vulnerabilities following disasters, primarily manifested through dramatic sales revenue losses, cash flow depletion, and prolonged operational downtime exceeding 6 to 12 months. Current disaster financing mechanisms remain fragmented and underutilized.

To achieve long-term MSME sustainability, Disaster Risk Financing (DRF) must be integrated into regional development policies. Collaborative frameworks involving government agencies (DTI, DOST, LGUs) and private sector financial institutions are essential to provide structured credit, subsidized disaster microinsurance, and mandatory Business Continuity Planning (BCP) training.

5. STRATEGIC RECOMMENDATIONS AND FRAMEWORK

Based on empirical findings, the following strategic measures are recommended:

1. Government-Subsidized Insurance & Liquidity Facilities: The Department of Trade and Industry (DTI) and Local Government Units (LGUs) should collaborate with private insurers to establish subsidized microinsurance programs and soft-loan facilities tailored for MSMEs.
2. Mandatory Business Continuity Planning (BCP): DTI should institutionalize mandatory BCP training as a condition for MSME business permit renewal. BCP frameworks should incorporate eight key modules:
   - Clear Objectives: Defining risk management scope and operational recovery goals.
   - Risk Analysis: Identifying environmental hazards and probability assessments.
   - Business Impact Analysis (BIA): Evaluating maximum allowable downtime and financial thresholds.
   - Business Continuity Strategy: Establishing alternative operational workflows and leadership protocols.
   - Recovery Strategy: Implementing physical asset repair, inventory recovery, and credit access.
   - Training Strategy: Capacity building for management and personnel on emergency response.
   - BCP Testing & Drills: Conducting simulation exercises to validate contingency protocols.
   - Periodic BCP Review: Regularly updating plans to align with evolving market realities.
3. Stop-Gap Short-Term Financial Relief: Establish zero-interest emergency bridge loans to sustain cash flow during the immediate 30-to-90-day post-disaster window.
4. Executive Disaster Management Training: Provide specialized risk-management and DRF integration seminars for MSME executives, operations managers, and business owners.
5. R&D and Supply Network Diversification: Partner with DOST to train MSMEs in adaptive product innovation, alternative raw material usage, and local supply chain resilience.

5.1 Recommended Sustainable MSME Resiliency Framework

The proposed strategic framework outlines multi-sectoral collaboration to enhance MSME disaster resilience across CALABARZON:

Framework Pillar	Strategic Components & Institutional Actions
1. Multi-Sectoral Financing Schemes	• Endowment funds for qualified micro enterprises • Interest-free bridge loans from government credit lines • Non-collateralized short-term loans with financial tax incentives • Commercial property and parametric microinsurance schemes
2. Capacity Building & Capacity Integration	• Mandatory BCP preparation supported by DTI & DOST • Executive training on risk assessment and cash flow protection • Workforce health, safety, and emergency response training
3. Institutional Support & Incentives	• Tax credits for participating private financial institutions • Government loan-guarantee mechanisms to mitigate default risks • Actuarial collaboration for precise parametric risk pooling

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ENTREPRENEURSHIP EDUCATION

Employers' Feedback on the Performance of BS Entrepreneurship Graduates

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ABSTRACT

This study explores the alignment between employer-valued competencies and the actual performance of Bachelor of Science in Entrepreneurship (BS Entrepreneurship) graduates from Mariano Marcos State University. The research focuses on the 10 Personal Entrepreneurial Competencies (PECs) established by Management Systems International (MSI): opportunity seeking, persistence, commitment to work contracts, demand for efficiency and quality, risk-taking, goal setting, information seeking, systematic planning and monitoring, persuasion and networking, and self-confidence. Using a descriptive quantitative research design, data were gathered from 30 employers (managers, direct supervisors, and senior staff) who directly supervise the graduates. Data analysis involved calculating mean scores and conducting a gap analysis to identify discrepancies between employer expectations and graduate performance. Findings reveal that employers rate all PECs as either "Extremely Important" or "Very Important" (Composite Mean = 4.52), while evaluating graduate performance across these areas at a "Great Extent" or "Very Great Extent" (Composite Mean = 4.42). The resulting composite gap score of 0.10 indicates that graduate performance meets employer expectations to an optimum level. Nevertheless, notable relative gaps were observed in self-confidence (0.20), goal setting (0.18), and opportunity seeking (0.16). These findings underscore the importance of continuous curriculum refinement and enhanced academic-industry collaboration to promote practical competency mastery and optimize graduate employability.

Keywords: employers' feedback, Personal Entrepreneurial Competencies, BS Entrepreneurship graduates, gap analysis, employability

1. INTRODUCTION

In the context of today's rapidly changing job market, the gap between the skills that graduates possess and the competencies required by employers has become increasingly evident. Employers frequently express concerns regarding the readiness of higher education graduates to meet the complex demands of modern industries.

Research on graduate employability indicates that while technical abilities are generally well-addressed in academic programs, graduates frequently fall short in essential soft skills such as communication, teamwork, and critical thinking. This shortfall contributes to higher unemployment rates among recent graduates, as employers increasingly prioritize these holistic competencies. Notably, research by the University of Phoenix (2021) indicated that only 42 percent of employers believe pre-hire education sufficiently prepares recent hires for entry-level positions. This misalignment not only hinders graduates' career progression but also negatively affects organizational productivity and innovation.

To ensure that graduates possess the competencies required to meet market demands, educational institutions must work closely with employers. Identifying the key competencies that businesses seek in graduates is essential for enhancing employability. Collaboration between educational institutions and

employers is crucial for addressing skills shortages prevalent across industries. Such partnerships lead to the development of academic programs and experiential learning opportunities that equip students with the essential competencies needed to succeed in their careers.

Employers' feedback on graduate performance serves as a vital contribution to academic institutions, functioning as a primary indicator of curriculum relevance and effectiveness. This feedback provides actionable insights into how well graduates perform their professional responsibilities and meet employer expectations. Additionally, from the employer's perspective, such evaluations serve as a structured tool for assessing graduate competencies relative to organizational needs.

Personal Entrepreneurial Competencies (PECs) are particularly crucial in this context, as they encompass the skills and behavioral attributes necessary for individuals to thrive in entrepreneurial roles and contribute effectively to organizational success. It is vital for business students to demonstrate entrepreneurial competencies, regardless of whether they intend to pursue corporate employment or launch their own ventures. Given the dynamic nature of contemporary business, individuals with entrepreneurial mindsets and behavioral competencies are exceptionally well-suited to adapt, innovate, and thrive.

As educational institutions strive to equip students with necessary competencies, understanding the alignment between employer expectations and graduate performance across PECs is vital. This study utilizes the 10 PECs framework developed by Management Systems International (MSI): opportunity seeking and initiative, persistence, commitment to work contract, demand for efficiency and quality, risk-taking, goal setting, information seeking, systematic planning and monitoring, persuasion and networking, and self-confidence.

This study investigates employer perceptions regarding the importance of PECs in the workplace and evaluates the actual performance of BS Entrepreneurship graduates from Mariano Marcos State University across these competencies. By examining employer expectations alongside graduate performance, this research provides evidence-based insights to inform curriculum refinement and enhance graduate employability.

2. LITERATURE REVIEW

A comprehensive review of the literature highlights the essential role of core competencies in enhancing graduate employability. Empirical studies consistently indicate that soft skills, particularly the capacity to adapt to dynamic job demands, are highly valued by employers across various sectors. Further research corroborates this finding by identifying core components of employability across international contexts, including foundational business knowledge, soft skills, and prior work experience.

Moreover, employers consistently seek graduates who not only possess technical skills but also demonstrate the capacity to apply behavioral competencies effectively, thereby fostering a positive work environment that enhances overall organizational performance.

Management Systems International (MSI) developed a framework comprising 10 key PECs, which are widely applied in entrepreneurship education and professional training. These competencies, encompassing behavioral traits such as opportunity seeking, persistence, and risk-taking, are vital for entrepreneurial ventures and play a significant role in enhancing graduate employability across diverse industries:

- **Opportunity Seeking and Initiative:** The capacity to identify and capitalize on business or operational opportunities and take proactive measures to act on them. Research demonstrates that employers appreciate graduates who proactively identify and exploit opportunities within the organization.
- **Persistence:** The determination to overcome obstacles and challenges, continuously pursuing organizational goals despite difficulties. Graduates who exhibit persistence are more likely to overcome employment obstacles and achieve career success.
- **Commitment to Work Contract:** A strong sense of responsibility and dedication to honoring professional commitments and fulfilling contractual duties. This competency signifies reliability and responsibility—traits highly esteemed by employers that foster workplace trust and productivity.
- **Demand for Efficiency and Quality:** A focus on achieving high standards in work output and striving for continuous efficiency in processes. Graduates dedicated to delivering high-quality work efficiently are more likely to be retained and promoted.
- **Risk-taking:** The willingness to calculate and manage risks to achieve strategic business or career objectives. Graduates willing to take calculated risks drive innovation and forward-thinking initiatives.
- **Goal Setting:** The ability to establish clear, measurable, and attainable goals, accompanied by strategic planning. Graduates who can set and achieve goals demonstrate tangible accomplishments and clear career progression.
- **Information Seeking:** The proactive pursuit of relevant data and information required for informed decision-making. Graduates who actively gather and apply information enhance strategic planning and operational decision-making.
- **Systematic Planning and Monitoring:** The capability to plan methodically and evaluate progress toward established goals. Graduates with strong planning skills manage tasks efficiently, leading to enhanced job performance.
- **Persuasion and Networking:** The ability to influence stakeholders and build professional networks that support business and organizational goals. Graduates skilled in networking establish valuable professional relationships that create strategic career opportunities.
- **Self-Confidence:** A strong belief in one's abilities and decisions, essential for leadership and independent initiative. Confident graduates readily assume challenging responsibilities, resulting in career advancement and organizational leadership.

3. RESEARCH METHODS

A descriptive research design was employed to gather quantitative data regarding employer feedback. The study utilized a structured survey questionnaire to evaluate both the perceived importance of PECs and the actual performance of BS Entrepreneurship graduates across these competencies.

The study targeted employers who have hired graduates from the BS Entrepreneurship program at Mariano Marcos State University. A purposive sampling method was used to select 30 respondents, including business managers, direct supervisors, and senior administrative staff with direct knowledge of the graduates' work performance.

Data were collected through online surveys and paper questionnaires distributed directly to employers. The questionnaire contained dedicated sections measuring the perceived importance of each PEC alongside the observed extent of graduate performance. A five-point Likert scale was utilized to quantify responses, allowing for comprehensive quantitative analysis.

Data were analyzed using descriptive statistics, specifically mean scores. A gap analysis was conducted by subtracting mean performance scores from mean importance scores to identify discrepancies between employer expectations and graduate performance.

The interpretation scale adopted from Noel-Levitz (2008) was used to categorize the resulting gap scores, as outlined below:

Gap Score Range	Descriptive Interpretation (DI)
1.00 and above	Performance does not meet expectations (PDE)
0.51 – 0.99	Performance slightly meets expectations (PSE)
0.00 – 0.50	Performance meets expectations to the optimum (PE)
Negative Gap Score	Performance exceeds expectations (PEE)

4. RESULTS AND DISCUSSION

Table 1 presents the perceived level of importance of Personal Entrepreneurial Competencies (PECs) among employers who have hired BS Entrepreneurship graduates. This evaluation provides critical insights into the core competencies required for successful workplace integration.

Table 1. Level of Importance of Personal Entrepreneurial Competencies

Indicators	Mean	Descriptive Interpretation (DI)
Opportunity seeking	4.38	Very Important (VI)
Commitment to the work contract	4.62	Extremely Important (EI)
Persistence	4.54	Extremely Important (EI)
Risk-taking	4.53	Extremely Important (EI)

Demand for efficiency and quality	4.56	Extremely Important (EI)
Goal setting	4.59	Extremely Important (EI)
Information seeking	4.48	Very Important (VI)
Systematic planning and monitoring	4.46	Very Important (VI)
Persuasion and networking	4.43	Very Important (VI)
Self-confidence	4.64	Extremely Important (EI)
Composite Mean	**4.52**	**Extremely Important (EI)**

Legend: 4.51–5.00 Extremely Important (EI); 3.51–4.50 Very Important (VI); 2.51–3.50 Moderately Important (MI); 1.51–2.50 Slightly Important (SI); 1.00–1.50 Not at all Important (NI).

The composite mean score of 4.52 categorizes the overall importance of PECs as "Extremely Important". Competencies rated as "Extremely Important" include self-confidence (4.64), commitment to the work contract (4.62), goal setting (4.59), demand for efficiency and quality (4.56), persistence (4.54), and risk-taking (4.53). Other competencies rated as "Very Important" include information seeking (4.48), systematic planning and monitoring (4.46), persuasion and networking (4.43), and opportunity seeking (4.38).

These high ratings strongly align with established empirical literature regarding entrepreneurial competencies:

- **Rauch & Frese (2007):** Established a strong correlation between self-confidence and entrepreneurial achievement, noting that high self-confidence empowers individuals to initiate decisive actions and persevere through adversity.
- **Kuratko & Hodgetts (2004):** Contended that commitment to work contracts is pivotal in maintaining enduring professional relationships and ensuring consistent organizational performance.
- **Locke & Latham (2002):** Demonstrated that establishing specific, challenging goals is instrumental in achieving superior work outcomes.
- **Timmons & Spinelli (2009):** Asserted that prioritizing efficiency and quality allows business professionals to achieve sustainable organizational growth.
- **Markman & Baron (2003):** Found that individuals exhibiting persistence are better equipped to overcome operational setbacks and attain long-term objectives.
- **McClelland (1961):** Correlated a moderate propensity for risk-taking with successful entrepreneurial endeavors.

- **Shane & Venkataraman (2000):** Underscored the critical importance of systematic information seeking in identifying opportunities and mitigating business risks.
- **Brinckmann et al. (2010):** Demonstrated that structured planning significantly enhances performance outcomes in professional and entrepreneurial contexts.
- **Aldrich & Zimmer (1986):** Highlighted the vital role of social networks and persuasion in resource acquisition and business development.
- **Ardichvili et al. (2003):** Identified the capacity to recognize and capitalize on opportunities as a foundational determinant of entrepreneurial success.

Table 2 presents the extent of graduate performance across the 10 PECs as evaluated by employers.

Table 2. Extent of Performance of Graduates on Personal Entrepreneurial Competencies

Indicators	Mean	Descriptive Interpretation (DI)
Opportunity seeking	4.22	Great Extent (GE)
Commitment to the work contract	4.57	Very Great Extent (VGE)
Persistence	4.51	Very Great Extent (VGE)
Risk-taking	4.48	Great Extent (GE)
Demand for efficiency and quality	4.44	Great Extent (GE)
Goal setting	4.41	Great Extent (GE)
Information seeking	4.35	Great Extent (GE)
Systematic planning and monitoring	4.34	Great Extent (GE)
Persuasion and networking	4.40	Great Extent (GE)
Self-confidence	4.44	Great Extent (GE)
Composite Mean	**4.42**	**Great Extent (GE)**

Legend: 4.51–5.00 Very Great Extent (VGE); 3.51–4.50 Great Extent (GE); 2.51–3.50 Moderate Extent (ME); 1.51–2.50 Small Extent (SE); 1.00–1.50 Not at All (NA).

The composite performance mean of 4.42 categorizes overall graduate performance as "Great Extent" (GE). The highest-rated competencies demonstrated by graduates were commitment to the work contract (4.57) and persistence (4.51), both interpreted as "Very Great Extent" (VGE). This highlights strong reliability, professional dedication, and resilience among graduates. All other indicators were rated within the "Great Extent" category, demonstrating solid baseline performance while leaving space for targeted skill enhancement.

Table 3 presents the gap analysis comparing the perceived importance of PECs with the actual performance of graduates.

Table 3. Gap Analysis on the Importance of PECs and Graduate Performance

Indicators	Importance	Performance	Gap Score	Interpretation (DI)
Opportunity seeking	4.38	4.22	0.16	PE
Commitment to the work contract	4.62	4.57	0.05	PE
Persistence	4.54	4.51	0.03	PE
Risk-taking	4.53	4.48	0.05	PE
Demand for efficiency and quality	4.56	4.44	0.12	PE
Goal setting	4.59	4.41	0.18	PE
Information seeking	4.48	4.35	0.13	PE
Systematic planning and monitoring	4.46	4.34	0.12	PE
Persuasion and networking	4.43	4.40	0.03	PE
Self-confidence	4.64	4.44	0.20	PE

Composite Mean	**4.52**	**4.42**	**0.10**	**PE**

Legend (Noel-Levitz, 2008): 1.00 and above = Performance does not meet expectations (PDE); 0.51–0.99 = Performance slightly meets expectations (PSE); 0.00–0.50 = Performance meets expectations to the optimum (PE); Negative gap score = Performance exceeds expectations (PEE).

As shown in Table 3, the overall composite gap score is 0.10, which falls squarely within the "Performance meets expectations to the optimum" (PE) range (0.00–0.50). This result confirms that BS Entrepreneurship graduates successfully satisfy employer expectations across all evaluated competencies. Nonetheless, examining specific relative gap scores reveals key areas where graduate preparation can be further optimized: self-confidence (0.20), goal setting (0.18), and opportunity seeking (0.16).

5. CONCLUSION AND RECOMMENDATIONS

The findings demonstrate a strong alignment between employer-valued competencies and the performance of BS Entrepreneurship graduates from Mariano Marcos State University. Employers rate Personal Entrepreneurial Competencies as highly critical for workplace success, and graduates consistently meet these expectations across all 10 PEC indicators.

However, relative gaps in self-confidence, goal setting, and opportunity seeking highlight strategic areas for curriculum enhancement. To further bridge these minor competency gaps, the following practical measures are recommended:

- **Curriculum Refinement:** Integrate experiential learning modules—such as capstone business simulations, interactive pitch competitions, and real-world project management—to strengthen student self-efficacy, strategic goal formulation, and proactive opportunity recognition.
- **Industry Collaboration:** Establish formal, ongoing advisory councils with employer partners to conduct regular curriculum audits, offer direct mentorship, and align course learning outcomes with evolving industry standards.
- **Mentorship & Coaching:** Expand structured internship programs and professional coaching initiatives where students receive constructive feedback on workplace soft skills and entrepreneurial behaviors.

5.1 Limitations and Future Research

Several limitations of this study should be acknowledged. The sample size was limited to 30 employer respondents, which may constrain the broad generalizability of the results across all industry sectors. Additionally, employer feedback inherently carries subjective perceptions influenced by specific organizational cultures. Future research should expand the sample size across diverse industries and incorporate longitudinal tracking to evaluate graduate performance and career progression over time.

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Contributions of the Bachelor of Science in Entrepreneurship Program to the Growth of Micro, Small, and Medium Enterprises in the Philippines

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ABSTRACT

With a total of 54,330 (annual average of 5,433) Bachelor of Science in Entrepreneurship (BS in Entrep) graduates from Academic Year (AY) 2012-2013 to 2020-2021. The program has barely responded or at least have provided decent contributions in the development of Micro, Small, and Medium Enterprises (MSMEs) in the country. The graduates' contribution in the additional 188,315 (133,048 (71%) Micro) yearly for newly registered businesses are not visible or have no impact at all either. Even in the average employment of 93.4 percent annually, the same cannot claim to have been part in the generation of employment. The worst scenario however, is that graduates in this program could have become a part of statistics in the unemployment record of 6.8 percent annually. Knowing that a vibrant entrepreneurial activities especially in the countryside where there is seldom or no presence of big enterprises, it is the operations of the MSMEs that are the most reliable economic activities. They keep the lives and livelihood of the families and the entire community afloat. It is for this purpose why the BS in Entrep program was devised to provide more opportunities for employment, value creation, innovation, and as a potent tool that can be relied upon for economic development and sustainability through graduate engagements. Revised in 2017, the CMO 18, still did not show any significant impact as desired by the program. Determining academic issues and challenges in the delivery process, implementation, assistance, financial, reasons preventing the graduates in pursuing entrepreneurial undertakings, and possible intervention is sought by this study. Hopeful that Eco system for Entrepreneurship Education will play an active role as a result of this study.

Keywords: Entrepreneurial, economic contribution, transform, employer mindset, entrepreneurship education

1. INTRODUCTION

Entrepreneurship plays a vital role in national economic development. It serves as the backbone and lifeblood of any economy, whether large or small; without it, economic activity would stall. Micro, small, and medium enterprises (MSMEs) play a particularly critical role in developing the Philippine economy. They help reduce poverty by generating employment for the country's growing labor force, stimulating economic development in rural and far-flung areas, and serving as valuable partners to large enterprises as suppliers and service providers. Furthermore, MSMEs function as a breeding ground for new entrepreneurs and corporate entities. Consequently, a vibrant MSME sector indicates a thriving and growing economy. However, despite policies designed to foster an enabling environment for MSME

development, the sector continues to face various constraints that hinder it from realizing its full growth potential (Senate Economic Planning Office [SEPO], 2012). To address these challenges, key economic sectors aim to provide targeted support, assistance, training, and formal educational programs geared toward professionalizing the sector. The ultimate objective is to increase the number of skilled entrepreneurs who contribute to sustainable economic growth, as continuous entrepreneurial activity is essential for inclusive economic success. Demonstrating tangibly how higher education institutions (HEIs) contribute to these economic goals helps justify their ongoing academic offerings and institutional mission.

Global benchmarks illustrate the transformative potential of higher education entrepreneurship programs. In evaluating the performance and economic contributions of its alumni, the Massachusetts Institute of Technology (MIT) demonstrated the significant global impact of its entrepreneurship ecosystem. A study revealed that as of 2009, active companies founded by MIT alumni numbered 25,800, employing approximately 3.3 million people and generating annual world sales of $2 trillion—an aggregate revenue equivalent to the world's eleventh-largest economy (Roberts & Eesley, 2009). The study further noted that if these alumni-founded enterprises formed an independent nation, their total revenues would rank at least seventeenth globally. Similarly, research conducted by the Technology and Entrepreneurship Center at Harvard (TECH) found that 39% of Harvard alumni have founded a for-profit or non-profit venture, launching more than 146,000 companies and organizations operating across 150 countries. These ventures accounted for 20.4 million jobs worldwide and generated nearly $3.9 trillion in revenue in 2014 (The Harvard Gazette, 2014). These substantial contributions highlight how academic institutions can drive economic vitality and long-term prosperity.

In the Philippines, the Bachelor of Science in Entrepreneurship (BS Entrepreneurship) program was formally offered across select HEIs beginning in Academic Year (AY) 2006–2007, pursuant to Commission on Higher Education (CHED) Memorandum Order No. 17, Series of 2005 (CMO No. 17, s. 2005). The program was designed to contribute directly to job generation by training students to identify market opportunities, prepare business plans, and successfully launch and manage their own enterprises (CMO No. 17, s. 2005). Section 5, Article IV of CMO No. 17 explicitly stated that upon completion of all academic requirements, graduates should be equipped to establish and manage a commercial business. Despite these objectives, twelve academic years and approximately 35,000 graduates across eight cohorts yielded limited measurable progress in direct business creation. In response, CHED issued CMO No. 18, Series of 2017 (CMO No. 18, s. 2017), revising the curriculum and expanding the program goals. Under Section 5.3, Article IV of CMO No. 18, graduates within two to five years post-graduation are expected to: (a) set up a business, (b) manage a business, or (c) assume managerial positions in corporate planning, business development, or non-governmental organizations. Section 5.4 further specifies that graduates may pursue corporate roles such as business development staff, marketing assistants, or corporate planning officers.

While this broadened definition offers graduates flexible career pathways, it also raises questions regarding whether the core mandate of direct enterprise creation has been diluted. According to the Philippine Statistics Authority (PSA, 2022), MSMEs constitute 99.59% of all established businesses in the country (micro-enterprises at 90.49%, small enterprises at 8.69%, and medium enterprises at 0.40%). They

account for 65.10% of total domestic employment, 35.70% of value added, and 25.00% of export revenues. Despite these figures, the Philippine MSME sector lags behind neighboring Southeast Asian nations. For example, Indonesia hosts approximately 64.19 million MSMEs contributing 97% to domestic employment (Bisnis Indonesia, 2021), while Thailand's 3.13 million SMEs account for 99.6% of all enterprises and over 80% of national employment (Organization for Economic Co-operation and Development [OECD], 2020). Examining the actual contribution of BS Entrepreneurship graduates to Philippine MSME creation is therefore essential for evaluating higher education policy effectiveness.

2. OBJECTIVES

This study aims to evaluate and strengthen the role of the BS Entrepreneurship program in Philippine economic growth by achieving the following objectives:

1. Identify the key motivating and inhibiting factors that influence graduates in deciding whether to pursue entrepreneurial ventures versus corporate employment.
2. Provide practical guidance for entrepreneurship educators in designing relevant course requirements and assessing student compliance.
3. Devise pedagogical strategies and instructional interventions to transition students from an employee mindset to an employer mindset.
4. Establish an evidence-based teaching guide for entrepreneurship educators across higher education institutions.
5. Strengthen entrepreneurship education through collaborative partnerships among academic institutions, industry practitioners, and government agencies.
6. Resolve institutional misconceptions regarding program compliance, addressing practices where corporate employment ('entreployment') is substituted for actual venture creation.

3. CURRENT SITUATION

Higher education institutions routinely conduct self-assessments to evaluate program performance against regulatory standards. Standard institutional practice relies on tracer studies to track graduate outcomes. However, in the case of the BS Entrepreneurship program, many HEIs that introduced the program following CMO No. 17, s. 2005 did not systematically conduct formal tracer studies. Consequently, data regarding graduate career paths remained largely anecdotal. Where tracer studies were conducted, low response rates often skewed results. Some institutions reported high percentage compliance by classifying corporate employment under the expanded career options of CMO No. 18, s. 2017. However, translating these percentages into absolute numbers reveals that only two to four graduates per cohort typically established new businesses. These modest figures represent an insubstantial proportion of total graduates.

Notable exceptions exist within select institutions. In the National Capital Region (NCR), three higher education institutions reported that 75% to 99.98% of their BS Entrepreneurship graduates continued and expanded businesses initiated during their undergraduate studies. While these institutional models demonstrate remarkable success, their performance is overshadowed by the low venture-creation rates

of most other HEIs. Across the estimated 60,157 total graduates from AY 2010–2011 to AY 2021–2022, the direct contribution of BS Entrepreneurship alumni to new MSME creation remains minimal.

Facing declining enrollment and competition from public HEIs offering tuition-free programs, several private institutions have temporarily or permanently suspended their BS Entrepreneurship offerings. With a combined public and private output of approximately 5,500 graduates annually, even if all graduates launched businesses, they would add roughly 0.04% to the total pool of micro-enterprises. Successful venture creation is noticeably higher among elite private institutions where students possess greater family capital, reporting venture setup rates above 70%. In contrast, provincial universities report venture setup rates of 10% or lower, though some institutions achieve up to 61% compliance when corporate employment is included under the revised CMO No. 18, s. 2017 guidelines.

Regional labor statistics further highlight these operational dynamics. Despite hosting the highest concentration of MSMEs (206,765 establishments), the National Capital Region (NCR) recorded the lowest share of MSME employment generation at 50.21%, followed by CALABARZON (164,447 MSMEs) at 61.74% —both below the national average of 65.10% (PSA, 2022). Conversely, Eastern Visayas recorded the highest employment share (92.18%) across its 36,303 MSMEs, while BARMM recorded 91.70% employment contribution across 10,103 establishments.

3.1. Support for Entrepreneurship

3.1.1. Legislative Framework

Republic Act No. 10679 (Youth Entrepreneurship Act of 2014): Mandates the Micro, Small, and Medium Enterprise Development Council (MSMEDC), through the Department of Trade and Industry (DTI), to implement the Youth Entrepreneurship Program (YEP). YEP offers young Filipinos comprehensive training, mentoring, and support services.

Republic Act No. 9501 (Magna Carta for Small Enterprises): Amends R.A. 6977 to strengthen development, financing, and assistance programs for MSMEs nationwide.

Republic Act No. 10644 (Go Negosyo Act of 2013): Promotes job generation and inclusive growth by establishing Negosyo Centers in all municipalities, cities, and provinces to facilitate ease of doing business and provide access to services.

Republic Act No. 11032 (Ease of Doing Business and Efficient Government Service Delivery Act of 2018): Amends R.A. 9485 to streamline administrative procedures and reduce regulatory burdens on new and existing businesses.

3.1.2. Executive Agencies

Department of Trade and Industry (DTI): Provides comprehensive support for aspiring and existing entrepreneurs, including business registration assistance, capacity-building workshops, product development, market matching, and access to Negosyo Centers (DTI, 2022).

Department of Science and Technology (DOST): Implements the Small Enterprise Technology Upgrading Program (SETUP), providing seed funds, technology acquisition support,

packaging/labeling assistance, and calibration services. DOST also operates the DOST-Academe Technology-Based Enterprise Development (DATBED) program through TAPI, supporting student-led technology commercialization projects (DOST, 2021).

3.1.3. Financial Institutions

Land Bank of the Philippines (LANDBANK): Offers specialized credit facilities across all 81 provinces, including the I-RESCUE (Interim REhabilitation Support to Cushion Unfavorably-affected Enterprises) lending program, providing working capital loans at flexible interest rates and terms (LANDBANK, 2021).

Development Bank of the Philippines (DBP): Supports local enterprise growth through its Sustainable Enterprises for Economic Development (SEED) Program and Sustainable Agribusiness Financing Program (SAFP), driving regional employment and economic activity (DBP, 2021).

4. ISSUES AND CHALLENGES

The primary challenges confronting BS Entrepreneurship implementation and graduate venture creation include:

- Faculty Qualifications: A significant shortage of faculty members with practical entrepreneurial experience or active business ventures.
- Curricular Orientation and Student Mindset: Pervasive 'employment mentality' among students, families, and academic advisors, leading graduates to seek immediate employment rather than venture creation.
- Academic Readiness and Open Admissions: Open-admission policies that admit students lacking foundational business knowledge, complicating instruction in advanced business planning and execution.
- Instructional Resources: Reliance on foreign textbooks and business case studies that lack contextual relevance to the Philippine MSME operating environment.
- Venture Selection Bias: Heavy concentration of student business proposals in low-margin food service concepts, with minimal exploration of high-value service, manufacturing, or technology sectors.
- Institutional Commitment: Offering the program primarily for enrollment revenue without providing necessary incubation facilities, seed capital access, or mentorship infrastructure.
- Program Sustainability: Declining student enrollment in private HEIs driven by competition from public institutions and perceived uncertainty regarding graduate outcomes.

5. DISCUSSION

Entrepreneurship serves as a critical engine of national economic vitality. To realize its potential, academic institutions must systematically integrate entrepreneurial thinking across all levels of education, beginning with basic education to foster an early culture of innovation. Technical-vocational programs should similarly incorporate business management training so that skilled graduates can establish service enterprises rather than remaining sole wage earners.

While replicating the scale of alumni impact seen at institutions such as MIT or Harvard is a long-term aspiration, Philippine HEIs can make immediate contributions by strengthening local entrepreneurship ecosystems. The introduction of CMO No. 17, s. 2005 marked an important policy milestone; however, early implementation suffered from inadequate learning resources, unequipped faculty, and low student readiness. Although the revised CMO No. 18, s. 2017 sought to address operational realities by expanding acceptable career outcomes to include corporate roles, this expansion risks diluting the primary mandate of venture creation. If corporate employment is treated as equivalent to enterprise launch, HEIs may report high compliance rates without generating actual economic additions in terms of new businesses and jobs.

As Concepcion (2016) noted, developing an innovative, entrepreneurial culture is vital for achieving developed-nation status in the Philippines. Overcoming the deeply ingrained social fixation on employment after graduation requires coordinated effort across government, industry, and higher education. By providing structured mentorship, practical incubation, and streamlined access to capital, Philippine HEIs can fulfill their social contract to generate new business enterprises and expand economic opportunity.

6. FINDINGS

1. Variable Mandate Interpretation: Broad career options under CMO No. 18, s. 2017 allow HEIs to report high graduate compliance through corporate employment, masking low direct venture creation rates.
2. Instructional Capability Gap: A majority of entrepreneurship educators lack direct personal experience in operating a business enterprise.
3. Contextual Resource Scarcity: Locally authored, context-specific teaching materials and case studies remain scarce.
4. Regional Employment Disparities: Major industrial regions (NCR and CALABARZON) display lower relative MSME employment generation rates (50.21% and 61.74%, respectively) compared to rural regions such as Eastern Visayas (92.18%).
5. Incubation and Support Deficits: Institutional support for student business incubation, regulatory facilitation, and seed funding remains inconsistent across HEIs.

7. Tables and Data Summary

Table 1. Regional Distribution of Philippine MSMEs and Job Generation (2022)

Region	Micro	Small	Medium	Total MSMEs	% Share	Total Employment	% Share
Philippines	1,004,195	96,464	4,484	1,105,143	99.59%	5,607,748	65.10%
NCR	174,975	28,204	1,665	204,844	99.07%	1,426,870	50.21%
CALABARZON	149,865	13,153	692	163,710	99.55%	815,616	61.74%
Eastern	33,642	2,557	68	36,303	99.80%	157,159	92.18%

Visayas							

Note. Adapted from 2022 Philippine MSME Statistics in Brief, by Department of Trade and Industry, 2022.

Table 2. Regional Distribution of BS Entrepreneurship Graduates (AY 2010–2011 to AY 2021–2022)

Region	**Total Graduates (12 Yrs)**	**Annual Average**	**MSME Share (%)**	**Primary Career Outcome**
National Capital Region (NCR)	12,768	1,064	20.21%	Corporate Employment
CALABARZON (Region IVA)	6,278	523	16.14%	Corporate Employment
Central Luzon (Region III)	5,360	447	11.12%	Corporate Employment / Mixed
Bicol Region (Region V)	5,448	454	7.10%	Local Venture / Employment

Source: Commission on Higher Education (CHED), Office of Planning, Research, and Knowledge Management (OPRKM), 2022.

8. CONCLUSION

When rigorously implemented and fully supported, the Bachelor of Science in Entrepreneurship program holds immense potential to drive economic development, foster innovation, and create sustainable employment across the Philippines. The successful venture creation models observed in select NCR institutions demonstrate that high enterprise establishment rates are achievable when programs combine structured mentorship, practical incubation, and active industry partnerships. Replicating these achievements across all HEIs requires institutional commitment, faculty development, and aligned policy incentives. By prioritizing venture creation and equipping students with practical business tools, higher education institutions can fulfill their mandate as key contributors to Philippine economic growth.

9. RECOMMENDATIONS

1. Regular Quality Audits: Establish periodic CHED evaluations of HEI compliance with BS Entrepreneurship learning outcomes, specifically tracking graduate business startup rates.
2. Practitioner Faculty Integration: Require HEIs to engage active entrepreneurs and industry practitioners to teach core entrepreneurial courses.

3. Curriculum Sequencing Optimization: Offer foundational courses such as 'Entrepreneurial Mindset' in the first semester of Year 1, requiring a validated business concept proposal that feeds directly into subsequent Business Plan and Implementation modules.
4. Local Government Permit Assistance: Collaborate with Local Government Units (LGUs) to establish reduced-fee 'Student Business Permits' and streamlined registration pathways for active student enterprises.
5. Faculty Certification Programs: Develop national certification frameworks for entrepreneurship educators to enhance pedagogical capability and practical venture knowledge.
6. Localized Learning Materials: Encourage and fund academic research producing Philippine-focused case studies, instructional guides, and market analysis tools.

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Management Practices And Business Performance Of Sari-SariStore Owners: Input To Extension Education In Business Management

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ABSTRACT

This descriptive-correlational research evaluated the management practices and business performance of sari-sari stores in eight northern barangays of Borongan City, Eastern Samar. Data from 166 consenting sari-sari-store owners were collected using a self-structured survey questionnaire and analyzed using descriptive statistics and Pearson's correlation analysis. The study discovered that the sari-sari stores generally have been in operation for almost 6 years and were operated at an initial capital below â‚±10,000 which sell from 3 to 23 varied goods/items, and with its operation mostly run by family members. In terms of the extent of business management practices, it was found out that the store owners had a "high extent practice" of supply management, sales management, and customer relations but a "low extent practice" on inventory management and financial management. As to the business performance of the sari-sari stores, this was assessed regularly and the stores gave them a daily income from â‚±150 to â‚±105,000 and is taking them from 1 to 46 months to break even. Only two of the four sari-sari store profile was found to have a significant association with their business performance: the initial capital with income from sales and the number of months to break even, but the length of business operation was found to be significantly associated with income from sales only. The study found out also that the extent by which sales management, customer relations, and supply management were practiced was found to have a significant contribution to the store's business performance, particularly in terms of the number of months to break even. Hence, actions must be applied to the business management activities through a practical extension project for sari-sari store owners in the form of training or seminar to improve their knowledge and management practices for improved business performance.

Keywords: *management practices, business performance; sari-sari stores, ex*

1. INTRODUCTION

Sari-sari store is everywhere. It is a local, simple convenience store and one of the most common businesses in the Philippines.

A sari-sari store is a small neighborhood retail shop that serves members of the community (Hapinoy, 2016). The store typically carries everyday necessities for Filipinos. The sari-sari store's most exceptional attribute lies in its capacity to sell items individually or by the piece, or "*tingi*". The sari-sari store also saves customers money on transportation, which is especially beneficial in rural areas where some locations are far from the nearest market or grocery store (Schelzig, 2005). The sari-sari store represents several things to Hapinoy: an extended pantry serving the community's daily needs, a depiction of an average Filipino's way of life, a large distribution channel, and much more.

Because of the invaluable contribution sari-sari stores make to the local economies and how these impact the lives of Filipinos in the rural communities, there is a need to help the store owners in managing their day-to-day operations to be successful. And before an intervention can be designed for these stores, an empirical study should be conducted to look into how these stores are being managed to determine areas for improvement in their operations. The experiences of sari-sari store owners offer valuable insights that can serve as a significant input to extension education in business management. Research demonstrates that sari-sari stores play a crucial role in local economies, serving as essential pillars of the community. Understanding the challenges and successes faced by sari-sari store owners can provide valuable lessons for aspiring entrepreneurs and individuals interested in the micro-retail sector.

Moreover, empirical studies can shed light on the daily operations and management practices of sari-sari store owners. By delving into the intricacies of running these businesses, researchers can uncover areas for improvement and identify best practices that contribute to the success of these small enterprises. Lessons learned from the experiences of sari-sari store owners can inform the development of targeted extension education programs tailored to the unique needs and challenges faced by individuals operating within this sector. These insights can guide the design of training modules and capacity-building initiatives that focus on enhancing supply management, sales strategies, inventory control, and customer relations for sari-sari store owners. This is the underlying reason for the conduct of this study.

Truly, the success of any undertaking is seen in its management practice. Such may be the case of sari-sari stores operating in Borongan City. Hence, this study explored the operational management of sari-sari store owners in 8 barangays located in the northern part of Borongan City. Specifically, this was conducted to attain the following objectives: (1) To describe the profile of the sari-sari stores in terms of length of operation, initial capital, variety of goods/item sold, and number of persons involved in its operational activities; (2) To determine the owners' extent of management practices in their respective stores relative to supply management, sales management, and inventory management, and customer relations; (3) To assess the business performance of the *sari-sari* stores in terms of daily income from sales and number of weeks or months to break-even; (4) To find out if the profile of the *sari-sari* stores is associated with each of the business performance parameter above; and (5) To establish the relation between the perceived extent management practices of the *sari-sari* stores and its business performance. Based on the results of the study, actions could be identified for use in extension education that can support to achieve improved business management of these *sari-sari* stores.

2. REVIEW OF RELATED LITERATURE

2.1. On Characteristics of Sari-Sari Stores

As published by Primer Organization (primer.com.ph), *sari-sari* stores are typically owned and operated by a mother whose sole purpose for putting up the store is to augment their family income. Most *sari-sari* stores become a small family business, with other members of the family pitching in. The store usually carries basic goods such as canned food, instant noodles, coffee, soda, and other things that Filipinos get daily, as well as any commodity the community needs. Prices in sari-sari stores are also more affordable than convenience stores (but more expensive than supermarkets) because most of them are run from the owner's own home. They don't profit much from the business venture, though most of their stock comes from supermarkets, and they only have a 1- or 2-peso markup on everything they sell. This report is also based on Wikipedia about *Sari-sari Store*. "Sari-sari stores tend to be family-run and privately owned, operating within the shopkeeper's residence. Commodities are displayed in a large screen-covered or metal-barred window in front of the shop. Candies in recycled jars, canned goods, and cigarettes are

displayed, while cooking oil, salt, and sugar are stored at the back of the shop. Prepaid mobile phone credits are provided. The sari-sari store operates with a small revolving fund, and generally doesn't provide perishable goods requiring refrigeration. The few that do, have refrigerators to store soft drinks, beers and bottled water."

In detail, Nielsen (2014) reports online the following on maximizing distribution opportunities of sari-sari stores: "*Despite having limited floor area, the typical store can carry up to 200 products or stock-keeping units (SKUs), more than half of which are food items. Instant coffee mixes, laundry products, soft drinks, and cigarettes are the food, non-food, and beverage categories that are widely carried in sari-sari stores. Meanwhile, Maggi Magic Sarap and Milo tie for the food brand with the most presence in stores despite having coffee as the top distributed category. For non-food and beverage, Surf and Coca-Cola lead the brands respectively. As of June 2014, an average sari-sari store can sell FMCG products amounting to Php26,000 a month, about Php5,000 more than the average two years ago.*"

According to Manarang (n.d.), the standard inventory of items sold in a sari-sari store is as follows: canned goods, instant coffee, rice, toiletries, powdered drinks, instant sauces, cooking oil, instant noodles, snacks, and sugar. Jay (2017) shortlisted these into five items: instant products (noodles, coffee, milk), canned goods, toiletries, basic cooking needs (cooking oil, basic spices, and flavorings), snacks, and soft drinks.

As to working capital and profit for sari-sari stores, Colayco (2012) stated that the required inventory capital can range from PhP10,000 and more. There may be costs for permits and fees for the barangay, depending on the practice in the area, plus any renovation that may be needed to convert the place into a store. A successful owner said that if one wants significant earnings, no less than PhP50,000 in inventory capital is needed. Examining the margins that store owners add, it seems that 20% is a good average. Assuming there is a turnover of inventory at least twice in one month, then a gross profit of anywhere from PhP2,000 to PhP10,000 per month can be realized, which can be added to the inventory to become more successful.

Malapit (2007) summarized the following characteristics of those who are most likely to operate a sari-sari store: their income sources are subject to variability, they have relatively small levels of capital or savings, they have access to a pool of family labor with low opportunity costs of time, and they live in low- income communities with strong social networks but with limited investment and employment opportunities.

2.2 On Management Practices of Sari-Sari Stores

The three most important factors for success in a sari-sari store are pricing, customer relations, and inventory control (Colayco, 2012). The activities to be practiced along these three factors are explained in this report as follows: in pricing, sari-sari store owners say that they check out the competition in their area to determine their selling price. If they are all checking each other out, it must be the oldest store in the area that sets the benchmark. However, each owner does not necessarily follow the benchmark. Each has a reason to sell higher or lower than the benchmark. For example, some owners have a source where they can purchase at a much lower price than the regular wholesalers and supermarkets. Others believe that they can price higher because they have a better location or better service. In terms of **c**ustomer relations, it is suggested to always be in touch with the needs of customers. Having known what else they would buy that is not yet available and at what price, tell them on the date when these will be available. As to **i**nventory control, the owner must set a day for inventory of all items to be sold. For each item in the store, there should be a stock card (can be a piece of paper). The stock card should have columns for date purchased, number of units, price/unit, total price, date sold, number of units sold, selling price/unit, total price, and balance number of units. Further, the owner makes the stock cards for each item, giving the

correct description, and they should be filed alphabetically in a box for easy retrieval. Once a week or at least once a month, the owner must make a total inventory to make sure that the Balance Number of Units column for each item matches and to know the profits. In addition, it is suggested to canvass where purchase costs are cheapest and to plan trips to reduce transportation costs as well as to look for some suppliers who are willing to deliver.

Jay (2017) has recommended steps for managing a sari-sari store. First is to make it clear to the community and to the people close to you that your sari-sari store is not their fridge, but your source of livelihood, and they should respect that. Second isook recording, by maintaining expenses and income records daily to organize and manage the business properly. So, start recording daily. Third is to vary sales, which can be done by experimenting with different items that are not commonly found in other typical sari-sari stores. Examples are school supplies during the start of the school year, umbrellas during the rainy season, and all other ideas that can be based on the time of the month. Always be observant of what the other sari-sari stores provide and what they do not to give you some ideas on what to provide to your customers. The fourth is provide top quality productsby adopting practices such as not usingthumb tacks or staples to display items because it will punch a hole to the sealed product, exposingproducts that can be easily spoilt by heat under direct sunlight (e.g., chips and noodles); storing rice in in air-tight containers and elevated from ground to avoid pests infestation; cleaning bottled drinks before putting them inside the refrigerator; practicing FIFO First In First Out) method where earlier procured products must be sold first over recent ones; and maintaining the store's cleanliness of your store and its vicinity. Finally, perform daily inventory of store items by tracking fast-moving ones and ensure that they are always replenished.

According to Schelzig (2005), sari-sari store owners often put a markup of about 10% on average, compared to the 20% markup average of the alternative 24/7 convenience stores such as 7-11, so most Filipinos tend to buy at sari-sari stores whenever possible. Some sari-sari store owners buy commodities in bulk at groceries, then sell them in the store at a markup price. Some trucks usually deliver items for sale to the store itself. The sari-sari store also allows credit purchases from its "suki" (repeat customers known to the store owners). They usually keep a record of their customers' outstanding balances in a school notebook and demand payments on paydays.

Estrella (2017) offers 10 strategies to manage a sari-sari store successfully and most important of which are the following: On the setting of prices, it should not be set too high, especially if there are already existing stores in the area or better still is to somehow institute a price war by charging the lowest possible amount for your goods while still retaining a decent profit. An owner should look for good suppliers and cultivate a healthy relationship with them. To be competitive, she advised that owners should go directly to distribution companies that supply groceries and try to source merchandise from there to be able to price items lower, thereby further increasing profitability. A store owner should keep track of revenues and expenses in ledger notebooks and, from this bookkeeping, they can pick the right merchandise to stock. A store owner should also take note of their customers' buying habits so they can identify the items that regular customers always look for and want. Moreover, preserving the quality of goods sold is a must, so it is important to monitor store shelves at least once a week to see if there are any expired or damaged products that need to be discarded. A key strategy for a sari-sari store owner to grow their business beyond its humble beginnings is to set aside a portion of their profits to cycle back into the business. Most of all, Estrella advised sari-sari store owners to register their business since she believes that operating a registered business gives the owner more credibility and makes the store more trustworthy, since those plaques and certificates tell your customers that you are complying with basic hygiene and safety standards.

Parallel to the tips suggested by Estrella, other valuable tips that a sari-sari store owner should do to manage the business successfully are offered by Manarang (n.d.). These are: register the store as a legitimate business; respect the store as a source of income; no to credit; increase added value; maintain records; buy from wholesalers; offer variety; be different; observe quality control; and never run out of stock.

As to customer relations, Bonnin (2004) and Silverio (1982) agree that sari-sari store owners can capitalize on personal relationships and social networks within the community to maintain loyal customers and expand their potential sales despite the existence of other competitors. In exchange for their loyalty to the store, regular customers or *suki* often receive preferential treatment by being able to purchase on credit and enjoy discounts or extra portions. In addition, Bonnin said that an owner can successfully enlarge and sustain one's customer base by forging bonds of familiarity, by being *malambing* (charming) and *mabait* (pleasant), and engaging in *chica-chica* (chit-chat or gossip) with customers. Moreover, Silverio remarked that good relationships with customers are the antidote against competition.

In the area of small and medium enterprises, Abanis et al (2013) conducted a study abroad (in Western Uganda) that evaluated their financial management practices along these five dimensions: (1) working capital management (cash management, accounts receivable management and inventory management practices); (2) investment; (3) financing; (4) accounting information systems; and (5) financial reporting and analysis.

No formal study related to the proposed study was found in the literature search, whether at the local scene or abroad. However, the reviewed literature has given important insights to the researcher, particularly in identifying and measuring the research variables. For instance, the profile that may differentiate operations of sari-sari stores is the initial capital used, variety of items sold, and number of persons engaged in its operation. For the management practices of sari-sari stores, these could be summarized into supply management, sales management, inventory management, and customer relations.

3. METHODOLOGY

This study followed the descriptive-correlational method of research to realize the five objectives. It was conducted among operational sari-sari stores in the northern barangays of Borongan City, including Maypangdan, Bayobay, Tabunan, San Saturnino, Tamoso, Sta. Fe, Canjaway, and Bugas. The data were procured from proprietors of sari-sari stores who served as respondents for the study. A total enumeration was conducted, involving all sari-sari store owners in the study area, resulting in 166 respondents who were invited to participate in the research. Data for this study were collected using a self-structured survey with three parts, and the survey instrument was pre-tested to evaluate the clarity of the items, ensuring the accurate collection of relevant data.

The first part focused on the profile of the sari-sari stores, covering factors like length of operation, initial capital, variety of goods sold, and the number of people involved. Descriptive statistics (frequency, percentage, mean, and range) were employed in analyzing the profile of the respondents.

The second part evaluated respondents' practices in managing their stores across four areas: supply management, sales management, inventory management, and customer relations. Responses were recorded on a four-point Likert scale, with 4 representing "Definitely Practiced" to 1 indicating "Never

Practiced." The data were analyzed by calculating the average mean, and the scores were interpreted according to the following guide:

Rating Scale	Equivalent Score	Mean Score Range	Interpretation
Definitely Practiced	4	3.26 - 4.00	*Very High Management:* The activity is practiced all the time to acquire the highest benefit or result to highest or most satisfying business performance of the sari-sari store
Oftentimes Practiced	3	2.51- 3.25	*High Management:* The activity is practiced most of the time as to acquire high benefit or result to a more satisfying business performance of the sari-sari store
Sometimes Practiced	2	1.76 - 2.50	*Low Management:* The activity is practiced at certain or very limited time as to acquire some benefit or result to just satisfactory business performance of the sari-sari store
Never Practiced	1	1.00 - 1.75	*Very Low Management:* The activity is never practiced as to acquire less benefit or result to unsatisfactory business performance of the sari-sari store.

The final section focused on the store's business performance, including income from sales and the time taken to break even. The data were analyzed using descriptive statistics, such as averages (mean, median, and mode), frequency, and percentage.

For the inferential analysis, a bivariate correlation using Pearson's r was performed to test the following two null hypotheses at the 0.05 level of significance: (1) The profile of the *sari-sari* stores is not significantly associated with their business performance; and (2) There is no significant relation between the perceived extent of management practices of the *sari-sari* stores and their business performance.

4. RESULTS AND DISCUSSION

4.1 Profile of the Sari-sari Stores

It can be noted in Table 1a that the majority of the sari-sari stores have been in operation for 1 to 5 years. However, there were those in operation for eleven years and up to 37 years already. These findings show that sari-sari stores have been in operation in their respective barangay communities for quite some time already. It can also be noted in Table 1a that, generally, almost half (47%) of the 166 sari-sari stores started

business operations with an initial capital below ₱10,000; however, there were those with initial capital below and above ₱10,000, from as low as ₱100 to as high as ₱100,000. This initial capitalization was already happening as early as 1991, as discovered by Sanchez in her study that investigated the business practices of sari-sari stores. Sanchez reported that the largest number of sari-sari store owners among her respondents started with initial capitalization in the amounts ranging from ₱4,500 to ₱5,000, and still others reported they entered the business with amounts ranging from ₱100 to ₱500.

On the other hand, as could be noted in Table 1b, almost half (47%) of the respondents are selling from 10 to 15 variety of goods or items to their customers, but it can be seen also form Table 1b as indicated by the range value that there was a sari-sari store which sold 3 kinds of items/goods and there is also a sari-sari store which is selling up to 23 varied items/goods. The data in Table 1b also reveal that the majority of the sari-sari store owners (92.2%) never hire employees or other persons to handle or help them operate their sari-sari businesses, probably as part of their cost-cutting measures. For the other 8% of the sari-sari stores, owners have reported that there are other persons involved in the store operations, wherein their child/children were mostly mentioned as providing help, followed by the husband or hired helpers outside of family members. The above findings on the persons involved in the operation of sari-sari stores confirm what Balasan (2014) has reported in her study that "over 95 percent of businesses in the Philippines are family-owned and run…"

4.2 Sari-sari Store Owners' Extent of Management Practices

The data in Table 2 reflect the overall extent of management practices of the sari-sari store owners in the five pre-identified dimensions of business management. Based on their responses on a four-point scale and the computed mean, the sari-sari store owners were found to have a "high extent" of practice in only three of the five dimensions of business management: supply management, sales management, and customer relations. The other two dimensions - financial management and inventory management - were generally practiced by the sari-sari store owners to a "low extent". It could be interpreted from these findings that the sari-sari store owners practiced, most of the time, activities related to supply management, sales management, and customer relations to acquire high benefit or result in a more satisfying business performance of the sari-sari store, and less time was spent on activities about financial management and inventory management.

It is worth mentioning here that the sari-sari store owners were asked to identify their extent of practice of pre-identified activities related to each of the five dimensions of business management, as summarized in Tables 2a to 2e, and those that were found/noted to give a good as well as poor description of these business management behaviors are highlighted in the discussion that follows.

In terms of supply management, it is revealed by the data in Table 2a that there were 6 of the 11 pre-identified activities that were definitely practiced or practiced all the time, or "very highly managed," to acquire the highest benefit or result and the highest or most satisfying business performance of the sari-sari store.

As could be noted in Table 2a, these activities in descending order within the extent of definitely practiced are: (1) Provide/sell products/goods that are in top/good quality by maintaining their freshness, cleanliness and good appearance, (2) Sell products/goods that regular customers look for, (3) Use generated income to purchase products/goods for sale, (4) Stock products/goods that are most in demand by customers, (5) Replenish fast-selling items before stocks run out to be sure of supply availability, and (6) Buy products/goods from wholesalers.

The aforementioned practices were similarly observed in the business operations of sari-sari stores, as documented by Sanchez's 1991 study. The majority of the 160 sari-sari store proprietors surveyed cited their social responsibility to include providing consumer goods and services, offering premium products, procuring merchandise at reduced costs and vending them at commensurately low prices, retailing clean and safe foods, and satisfying consumer needs. Even though these were observed in the early 1990s, these practices will surely continue because, in the words of Sanchez, "*Evidently, the sari-sari store, is a phenomenon that is here to stay; and it is one, if not the main, source of livelihood for a great number of Filipino families.*"

There were also other related practices that were performed most of the time or "highly managed" by the sari-sari store owners in their supply management, that is, to canvass where purchase costs are cheapest and to have a schedule for the purchase of products/goods for sale. Whereas, there were 3 activities related to supply management that the store owners sometimes practiced or had "low extent of management" that some kind of educational intervention is needed on supply management which are on "observing what the other sari-sari stores provide and what they do not provide to give an idea of what goods/items to provide/sell in the store, arranging with distributors for the supply of products/goods, and using borrowed fund to purchase products/good for sale. The findings of this study are supported by Funahashi's (2013) idea that to effectively implement a business model in the retail market, it is necessary to address the specific needs and desires of the consumers who comprise it.

In terms of sales management, some activities were definitely practiced or "very highly managed" by the sari-sari store owners. In particular, these were on "setting a mark-up for each group of products/goods, practicing the First In First Out (FIFO) method where you sell the product/goods and repacking goods for sale into smaller quantities (Table 2b). These activities were followed next by activities that were "highly managed" or practiced most of the time, such as "setting aside a daily portion to cycle back into the business, setting aside a daily amount of sales to pay for the store's operational expenses, assessing periodically bad debts, selling goods/products by cash, and setting a minimum cash balance every day. It could be implied from the foregoing results that the sari-sari store owners have knowledge and know the importance of sales management in their small enterprise. However, it is disheartening to note that these sari-sari store owners are also practicing sometimes actions that would not result to acquiring some benefit or satisfactory business performance of the sari-sari store such as the case of allowing family members to consume goods without paying for them, compromising cash flow by extending credit customers, checking out competition in the area to determine selling price of goods/products, and saving cash surplus in a bank. It is only good that the sari-sari store owners have a credit policy in place, which is managed to a "low extent" or seldom practiced, but they "highly managed" extending credit to good customers only.

Some of the findings from this study have also been noted by Ganoan and Gempes (2020) as determining factors for the triumphs and downfalls of sari-sari stores. Those identified that were found to corroborate the findings of the present study are: (1) Offering a diverse range of products to prevent customers from seeking alternatives, (2) Meeting all customer needs, (3) Utilizing merchandise for personal use, and (4) Securing loans to sustain business operations.

It may be recalled that the sari-sari store owners "seldom practiced" or have a "low extent" of performance in inventory management and financial management in their business operations. This finding may be attributed to their lack of technical skills and knowledge in conducting inventory management and in activities aligned with financial analysis, such as record-keeping and accounting. In

fact, all the statement indicators applicable to inventory management were reported by the sari-sari store owners to be "seldom practiced," which was also the case in two out of the three indicators on financial management (making/updating daily the record of expenses and income and preparing a cash flow statement). It was only in the regular performance of financial analysis, which was done weekly or monthly to assess the business performance of the store, that it was "oftentimes practiced". These findings can be noted in Table 2c and 2d.

The above findings support what was comprehensively reported by Sanchez in her study conducted in 1991 as follows: "*Many of the respondents do not keep an accounting record of their purchases and sales. They do not find a need for this for several reasons. Some said it is just a waste of time since their store is a single proprietorship. Others said they do not have time to sit down and write things. Still other reasoned out that what is important to them is the inflow of cash*." Likewise, the findings of this study seem to echo the report of Malapit (2007) citing Silverio (1982) which states that: "*As an industry, the informal home-based sari-sari store has been described as inefficient because of their high and uneven prices, and because of the lack of record-keeping and the frequent diversion of inventory for household use, sari-sari stores are " not managed scientifically as a trained businessman would manage his business" and instead operate intuitively in search of profit."*

Hence, this research offers a strong suggestion for the sari-sari store owners to be aided through their attendance in business management capability training or seminar. Similarly, Pagara (2022) suggested that proprietors and prospective proprietors of sari-sari stores partake in training sessions and workshops centered on enhancing their marketing strategies. This recommendation seems to support the opinion of Leviste (2008), which is that: "*While the sari-sari store as a business has a very positive features such as low capitalization and minimal management skills or capacity requirements, flexible working hours, and business that is readily replicable, it is also has its foes such as minimal margin, lack of appeal to big manufacturers or distributors due to lack of inventory management system and low volume of transactions, too much competition and unregulated business (especially the small ones)."* Therefore, it is imperative to provide training on business management capabilities for these sari-sari store proprietors. This holds paramount importance as per the findings of Pagara (2022), wherein employee empowerment has been established to bolster the sales growth of small enterprises across diverse domains of the service industry. As per her research, formal channels for employee training and recruitment have contributed to augmenting sales growth in catering firms, which could potentially hold for sari-sari store operations or retail business sectors as well.

In Table 2e, the results of the study indicate that sari-sari store owners clearly know the value of maintaining good customer relationships, with three activities reported to be "definitely practiced", except for giving "suki" discounts or extra portions to loyal customers or repeat customers, which was "never practiced". This finding confirms the following idea of Ganoan and Gempes (2020): "*Starting a business is about more than just making money. It also entails gaining the confidence to move forward, developing a desirable amount of willpower, and establishing a long-term relationship with customers. Entrepreneurs should understand the importance of establishing a solid foundation for business success - a genuine and warm connection between the seller and the buyer, or customer relations in the context of this study.*

4.3 Business Performance of the Sari-sari Stores

Table 3a shows that the majority of the sari-sari store owners perform either daily, weekly, or monthly assessment of their income from sales. From their analysis, the sari-sari stores are earning a daily sale from

₱100 to ₱105,000, or an average daily income of ₱5,435.98, and income from weekly sales from ₱800 to ₱56,000, or an average weekly income of ₱11,925. This business performance, with regard to revenue generated from sales, are comparable to the findings of Funahashi (2013) regarding the allocation and utilization of sari-sari stores in the Philippines. In the report, Funahashi asserted that sales generated by sari-sari stores exhibit considerable variation at the level of individual shops. Specifically pertaining to the locale under scrutiny, Funahashi documented that in Taft, Eastern Samar, daily sales of sari-sari stores ranged from a modest ₱200 to an impressive ₱10,000. The difference in business performance in Eastern Samar (between Taft and Borongan) is due to the location of the sari-sari stores in this study, which are in rural barangays. Funahashi emphasized that the expansion of sales is predominantly a factor of the magnitude of the establishment. Furthermore, he contended that sari-sari stores will possess buying influence if they serve ten or more customers daily.

On the other hand, as to the business performance of the sari-sari stores as indicated by the number of weeks or months to break even, it was revealed by the owners that it would take their sari-sari stores to break even between 2 weeks and 12 months, with almost half (48.43%) mentioning between one to three months (Table 3b). The findings on the business performance of the sari-sari stores in this study are confirmed by Bonnin and Sanchez. As a result, store owners recognize that excessive competition is a problem, and many claim that their stores are "just breaking even" and are not profitable (Bonnin, 2006). Earlier, Sanchez (1991) reported that sari-sari stores do not make much. That is, out of the 160 respondents in Sanchez's study, 25 received from ₱20 to ₱100 a day, 24 earned from ₱500 to ₱600 daily, and 44 made between ₱200 and ₱300 every day. Sanchez also reported that there are store owners who earned more than a thousand pesos a day are those who have invested big amounts in their stores when they are able to take advantage of special offers and opportunities as these come along.

4.4 Association between the Profile of the Sari-sari Stores and their Business Performance

Table 4 summarizes the results of the test of relationship between the profile of the sari-sari stores and their business performance. Results show that there is a significant relationship between the length of operation (p=.000), initial capital (p=.002), and income from sales. Moreover, a significant relationship is observed between the initial capital and the number of months to break even at the .01 significance level. All the correlation indices for these significantly correlated variables were positive, implying that the longer the business operation is and the bigger the initial capitalization, the greater the possibility of obtaining more income from sales. This is supported by the study report of Sanchez (1991) that store owners who earned more than a thousand pesos a day are those who have invested big amounts in their stores.

Whereas, the other two profiles of the sari-sari stores, a variety of items/goods sold and the number of persons helping in the operation, which in this study were found to be among the family members (or family-run business), were found to have no significant association with the business performance of the sari-sari stores. The latter finding confirms an earlier finding by Balasan (2014) in a study on "Family-Owned Business in Asia: Their Political Economic Power," which reported thus: '*After taking account of possible endogeneity problems, we do not find that family control is associated with performance measured in terms of accounting ratios, sales per issued capital, earnings per share and market-to-book value.*"

The findings above mentioned in this study partly support the null hypothesis that the profile of the sari-sari stores is not significantly associated with their business performance.

Extension education programs can utilize these findings to create targeted training materials, workshops, and resources that address key variables linked to business performance such as the length of operation, initial capital, and income from sales, empowering store owners with practical knowledge and skills to enhance their operations and achieve their financial goals.

4.5 Relation between the Extent of Business Management Practices of the Sari-Sari Stores and Their Business Performance

It can be noted in Table 5 that none of the extents of practice of the five dimensions of business management was found to have a significant relation with the business performance of the store in terms of income from sales. Whereas those business management practices that were found to be practiced to a "high extent," such as supply management, sales management, and customer relations, were all found to have a significant correlation with the store's business performance in terms of number of months to break even. Therefore, the null hypothesis that there is no significant relation between the perceived extent of management practices of the *sari-sari stores* and their business performance is partly accepted. The discoveries regarding the notable correlation between the perceived scope of management practices implemented in sari-sari stores across three dimensions and their business performance validate Jha's (2021) conclusions that a majority of components pertaining to performance management exhibit positive and fundamental associations with business performance. It could be implied from this finding that the more frequent or regular practice of activities relevant to the business management of the sari-sari stores, the more likely that the store will be able to break even in the soonest possible time to reach a point at which cost and income from the business operations are equal, and there is neither profit nor loss.

Extension education initiatives can prioritize training modules that delve deeper into supply management, sales strategies, and customer relationship building, emphasizing the critical role these practices play in achieving financial sustainability and business growth. Extension education programs can utilize these insights to tailor their content to focus on enhancing competencies in supply management, sales techniques, and customer relations, aligning educational efforts with the practices that have shown a significant impact on business outcomes. Furthermore, extension education can emphasize strategies for streamlining operations, improving cost-effectiveness, and enhancing overall efficiency in areas such as procurement, sales optimization, and customer engagement to expedite the path to profitability for small businesses.

5. CONCLUSIONS

Based on the findings of the study, the study concludes that:

The majority of sari-sari store owners in the northern part of Borongan City, Eastern Samar, are mostly operated by family members and have been in operation for up to five years already, with an initial capital below ₱10,000, offering 10 to 15 different variants of goods/items for sale.

The sari-sari store owners are not practicing all activities well to acquire high benefits or to result in a more satisfying business performance, particularly in the five dimensions of business management considered in this study: supply management, sales management, customer relations, inventory management, and financial management. Hence, it is suggested that these sari-sari store owners be provided with and made to attend relevant training and seminars for them to acquire knowledge and simple tools needed for the success of the business management of their retail stores.

In terms of business performance, sari-sari stores were found to earn an average daily and weekly income of ₱5,436 and ₱11,925, respectively, and took them between 2 weeks and 12 months to break even. However, these conditions could still be improved.

The length of operation and the initial capital used by sari-sari stores were significantly associated with their business performance. Also, a significant correlation was observed between the extent of business management practices and the business performance of the sari-sari store. That is, the greater or more frequent the extent of practice, the more significant was its association with the number of months for the store operations to break even.

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From Students To Entrepreneurs: The Role Of University-Based Business Courses In The Development Of Entrepreneurship Competencies.

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ABSTRACT
Recognition of how university-based courses contribute to the development of entrepreneurship competencies among young entrepreneurs has increased recently, both in the academe and in practice. Entrepreneurial competencies are a combination of skills, knowledge, traits, and motives for successful entrepreneurship. The study aims to identify how university-based courses such as Strategic Management, Marketing Management, Banking, Finance, and Operations Management improve students' entrepreneurial competencies and how they apply them as entrepreneurs. The study used a survey method and regression analysis to interpret the results. The study selected around 119 young entrepreneurs who had already taken the courses as respondents. The results showed that university-based courses strongly predict the development of Entrepreneurial Competencies. This study contributes to the literature addressing the gap between academe and practice.

Keywords: Entrepreneurship, Entrepreneurial Competencies, University-Based Business Courses, Students.

1. INTRODUCTION

Entrepreneurship is a critical element, especially in an economy that seeks efficiency. Entrepreneurship brings innovation and increases employment by creating jobs(Ataeia et al. 2020). Likewise, entrepreneurship is regarded as a critical factor in areas of both innovation and competitiveness (Horng et al. 2020). Therefore, entrepreneurial competency development is said to be the combination of skills, behaviors, motivations, and knowledge. Likewise, it is a major factor in determining economic competitiveness (Łopatka 2021). University-based education, specifically in the areas of business, plays a critical role in providing students with the entrepreneurship competencies they need. Studies suggest that a structured program significantly influences entrepreneurial capability, performance, and intention, contributing to students' transition into entrepreneurs (Hou et al. 2023). Despite the increased significance of entrepreneurship education, understanding of it is still limited, specifically regarding the influence of university-based business courses on the improvement of entrepreneurial competencies (Martins, Perez, & Novoa, 2022). This literature gap calls for further research to address the necessary courses that could help assess the readiness of the students in starting and sustaining possible ventures as entrepreneurs.

The recognition of how University-Based Courses contribute to the development of Entrepreneurship Competencies of young entrepreneurs has increased recently, both in the academe and in practice (Hou et al. 2023). The literature about the impact of entrepreneurship education is limited, as argued by Martins, Perez, and Novoa (2022), despite the increasing recognition of the importance of University-Based courses and their effects on a global scale. The question is: How likely are college students enrolled in university-based courses to develop entrepreneurial competencies? Furthermore, what are the factors that

influence entrepreneurial competencies? This study aims to identify how university-based courses such as Strategic Management, Marketing Management, Banking and Finance, and Operations Management improve students' entrepreneurial competencies and how they apply them as entrepreneurs.

2. LITERATURE REVIEW

2.1. Theoretical Foundations

In 1995, Barbara Bird suggests that entrepreneurial competencies are a significant predictor of a company's performance (Bird 1995). Furthermore, the author postulates that entrepreneurial competencies can be described as the characteristics possessed by an individual that contribute to creativity, growth, and survival. Entrepreneurial competencies are trainable (Thomas 2019) (Volery and Siemens 2013); it also refers to the combination of abilities of an entrepreneur (Man and Lau 2002). Entrepreneurial Competencies are the skills, knowledge, and abilities a potential entrepreneur must have to compete and overcome challenges in unpredictable economic situations. The Theory of Need for Achievement states that individuals who want to be successful seek to do so through their own abilities (McClelland 1961). Likewise, the theory of planned behavior indicates that, in determining an individual's intention, one's attitude toward behavior is a significant factor (Ajzen, 1991).

2.2. Context on University-based Courses for Entrepreneurial Competencies

The significant contribution of higher education, specifically business courses, can never be underestimated. Higher education contributes to economic development (Pucciarelli and Kaplan 2016). In recent years, the literature has reiterated the need for leaders to promote innovation and proactiveness in students' entrepreneurial competencies. Moreover, Adeela, Daniel, and Botelho (2023) stated that students with entrepreneurship education often used what they learned in school to come up with new business ideas. Entrepreneurial education needs a critical evaluation (Walmsley and Wraae 2022).

Strategic management refers to the use of an organization's resources to achieve its objectives. It involves setting objectives, analyzing the internal and external environment, conducting a SWOT analysis, and evaluating strategies. Moreover, strategic management can be approached from two perspectives: the proactive approach and the descriptive approach. The difference between the two lies in the way strategies are developed. More recent studies show that businesses perform better when they use strategic management (Allui and Sahni 2016). The ability to respond to change is an important factor in business (Del Guiduce et al. 2021). Strategic flexibility, or the ability to respond to changes in dynamic business environments, facilitates the adoption of digital transformation or digital innovation (Del Giudice et al., 2021). Likewise, a significant relationship exists between entrepreneurship education and entrepreneurship competencies (Boubkera, Arroud and Ouajdouni 2021). As a result, universities are encouraged to offer more courses that develop entrepreneurship skills, traits, knowledge, and motives.

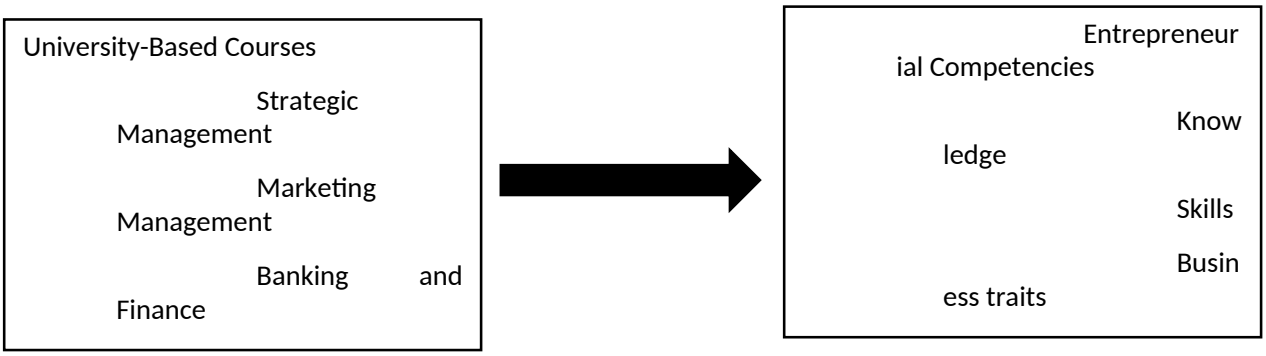
Marketing management involves planning and creating new products. It involves promoting and advertising (Mehek 2020). It controls marketing aspects, sets company objectives, organizes plans, supports decision-making, and helps meet customer needs. Entrepreneurial competencies are increasingly being related to university-based courses like marketing management. Teaching approaches about business plans should be reinforced (Tiberius, Weyland and Mahto 2023). Likewise, higher education institutions lack the agility to keep up with the changing market (Spada et al. 2022). Educational systems are struggling to keep up with labor market demand. Therefore, it is imperative for universities to update their curriculum and learning process. Universities are required to change their curriculum rapidly to align it with the current conditions (Mourtzis et al. 2018). The COVID-19 pandemic further accelerated

this need for adaptation by speeding up the digitalization of teaching and learning processes (Melluso et al., 2020).

Banking and finance traverse the dynamic areas of money. Finance, specifically, is a critical aspect of our economy as it provides us with the liquidity in terms of assets needed for both businesses and individuals to invest. Banking and Finance deal with the systematic management and movement of money. Microfinance influences the growth of an aspiring entrepreneur (Al-Azzam and Charfeddine 2022). Likewise, Prieger (2023) stated that lack of access to banks challenges entrepreneurs. The role of finance in entrepreneurship is underappreciated (Hodgson 2021),

Operations management refers to how businesses produce products and services more efficiently. It involves converting raw materials efficiently to maximize profits.

2.3. Research Paradigm



1. How likely are college students enrolled in university-based courses to develop entrepreneurial competencies?
2. What are the factors that influence entrepreneurial competencies?

2.4. Hypothesis

University-based courses are not a significant predictor of entrepreneurial competencies.

3. METHODS

To address the study's research question, this study used a descriptive quantitative research design. Quantitative research is the systematic empirical investigation of observable phenomena via statistical, mathematical, or computational techniques.

The research subjects are students in the College of Business Administration who own a business or have a family business. A Likert scale-type questionnaire with a scale of 1 to 5 was used. The interpretation used was 5 as strongly agree and 1 as strongly disagree. Experts in business education and a statistician reviewed the questionnaire. Likewise, the researchers created the questionnaire based on the curriculum, as guided by the CHED memorandum.

The researchers used purposive sampling to select participants who met the criteria of business administration or accountancy students with entrepreneurial experience. The experience is either through their family business or their own business. This method ensures that the sample consists of respondents who fit the criteria of having entrepreneurial experience. Data collection was self-administered and distributed online to respondents. Before distribution, respondents were briefed on the study's objective and asked for their consent. The survey was done over a span of one month to provide enough time for their responses. The data collected were analyzed using Minitab software. Descriptive statistics were used to summarize and interpret the results, and measures of central tendency and variability were evaluated. Furthermore, inferential statistics such as t-tests and ANOVA were applied to determine significant differences among the variables. To identify significant predictors, a multiple regression analysis was used.

4. RESULTS AND DISCUSSION

Model Summary

S	R-sq	R-sq(adj)	R-sq(pred)
0.367527	77.07%	74.37%	66.11%

The R-squared (R^2) value indicates how well the regression model explains the variation in the collected data. Generally, a higher R^2 value indicates that a greater proportion of the variation in the response variable is explained by the model. In this model summary, the R^2 value is 77.07%, which means that 77.07% of the variation in the response variable is explained by the predictors included in the regression model. This suggests that the model provides a relatively good fit to the collected data. However, the R^2 value alone does not indicate the sensitivity of the response variable to significant predictors.

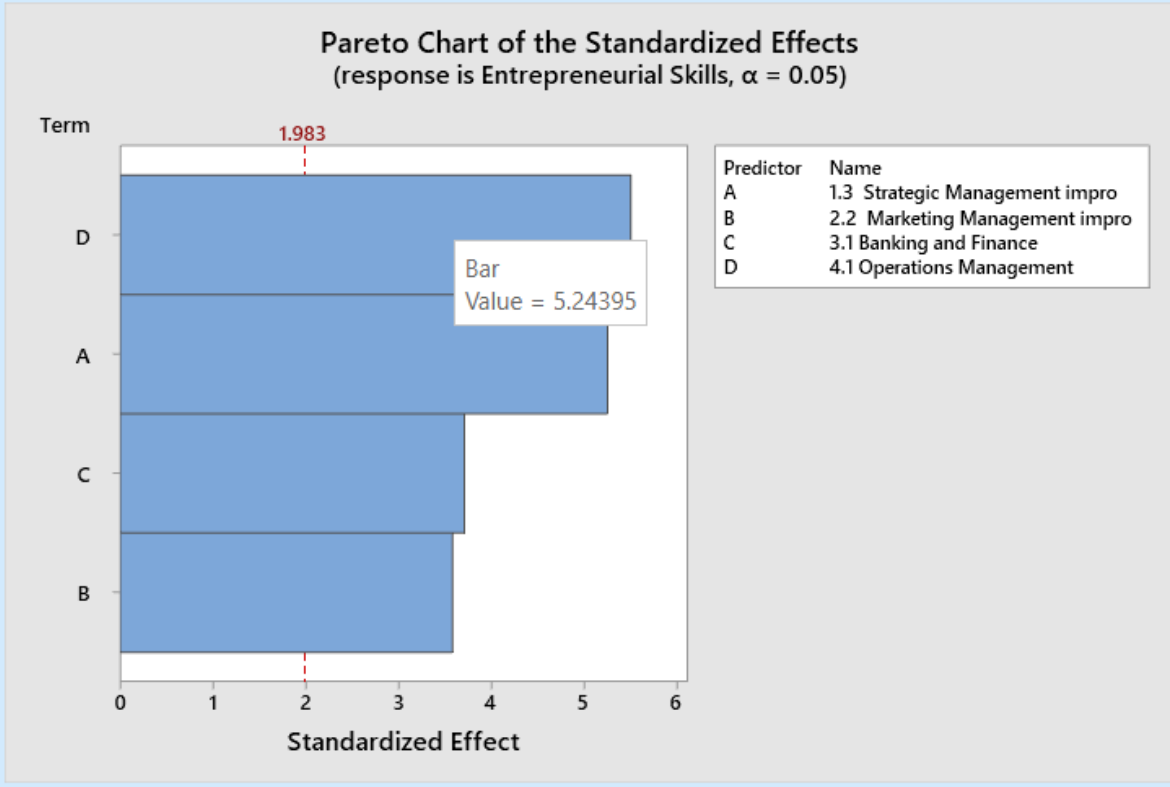
Analysis of Variance

Source	DF	Adj SS	Adj MS	F-Value	P-Value
Regression	12	46.309	3.8591	28.57	0.000
1.3 Strategic Management impro	3	4.864	1.6215	12.00	0.000
2.2 Marketing Management impro	3	2.579	0.8597	6.36	0.001
3.1 Banking and Finance	3	2.726	0.9088	6.73	0.000
4.1 Operations Management	3	5.270	1.7566	13.00	0.000
Error	102	13.778	0.1351		
Lack-of-Fit	25	4.328	0.1731	1.41	0.128
Pure Error	77	9.450	0.1227		
Total	114	60.087			

The ANOVA test for the model splits the total variance to determine the variation in the dependent variable due to the various factors. The regression is based on 12 degrees of freedom: the model consists of four main factors: Strategic Management, Marketing Management, Banking & Finance (3df), and Operations Management. The total sum of squares shows the total variance of the dependent variable, while the adjusted total sum of squares explains the extent to which each factor is responsible for the explained sum of squares; the output revealed that Operations Management (5.270) and Strategic Management (4.864) account for the most variance. The adjusted mean square shows the quotas

explained by each factor, adjusting for the degrees of freedom; here, once again, Operations Management had the highest figure of 1.7566, followed by Strategic Management, 1.6215. Likewise, the F-Values of the F-Values test, which establish the degree of explained variance to unexplained variance, are high, meaning that all the factors affect the dependent variable. In terms of F-values, Operations Management recorded the highest (13.00) and is therefore the most influential, followed by Strategic Management (12.00), Banking and Finance (6.73), and Marketing Management (6.36), which appear to be strongly significant. All the presented p-values are below the accepted level of significance, which is 0.05. Thus, the results have strong statistical Elm focuses on Operations Management and Strategic Management as the most significant among the evaluated factors. For the overall regression model, the significance is also high, which means overall these factors do explain a reasonable amount of variation in the outcome ($p = 0.000$). Another test that corroborates the model is the lack-of-fit test ($0.128 < 0.05$), which indicates a good fit without error.

The Analysis of Variance shows the significant predictors (Strategic Management-Business Traits, Marketing Management-skills in managing business, Banking and Finance-knowledge, and Operations Management-knowledge) of the response variables (Entrepreneurial Competencies). From the ANOVA table, the p-values for the variables above were less than the significance level of 0.05. Hence, they are significant predictors of Entrepreneurial Competencies. Thus, the null hypothesis is rejected.



On the Pareto chart, bars that cross the reference line are statistically significant. In this Pareto chart, the bars that represent factors D, A, C, and B cross the reference line, which is at 1.983

Moreover, this Pareto chart shows that the effects for Strategic Management-Business Traits, Marketing Management-skills in managing business, Banking and Finance-knowledge, and Operations Management-knowledge are statistically significant at the 0.05 level of significance. Operations Management-knowledge (D) has the largest effect because it extends the farthest. Followed by Strategic Management-Business traits (A). The effect of Marketing Management-skills in managing the business (B) is the smallest because it extends the least.

The study measures knowledge, skills, business traits, and motives for business of the college students that the University-based courses predict for entrepreneurial competencies. The study uses this measurement because it refers to University-based courses based on the curriculum set by the Commission on Higher Education.

5. CONCLUSIONS

Based on the findings, the variables Strategic Management-Business Traits, Marketing Management-skills in managing business, Banking and Finance-knowledge, and Operations Management-knowledge significantly predict entrepreneurial competencies. Therefore, these four variables had the greatest influence on student entrepreneurs' competencies.

6. RECOMMENDATION

Based on the study's findings and conclusions, the following recommendations are offered.

1. Understanding and mastering the intricacies of variable operations management stands out as the key driver for developing entrepreneurial skills in university-based courses. To truly nurture students' entrepreneurial spirit, universities should take a closer look at how we teach and learn, especially in knowledge-focused courses. Operations management is a prime predictor of entrepreneurial competencies in university courses. Regularly assess teaching methods, focusing on courses that enhance student knowledge. Cultivate theory-to-practice learning for students to engage with real scenarios, fostering characteristics of aspiring entrepreneurs**.**
2. In the areas of Marketing Management, specifically on the aspect of the student's skills, consistent teaching and learning methods should be developed. Topics on market and marketing digitalization should be reviewed consistently to keep up with the dynamic world of marketing, especially in technology.
3. Banking and Finance and Operations Management knowledge should be continuously improved through a more developed curriculum that deals with the aspect of best practices. Entrepreneurial knowledge about how to access banking and finance, as well as efficient knowledge of operations, should be continuously reviewed to develop a more consistent teaching and learning method that will enhance students' entrepreneurship learning experiences.

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The Impact of Entrepreneurial Education on New Business Performance: Case of a Pioneering Entrepreneurial Management Program in the Philippines

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ABSTRACT
This study examines the academic performance under a pioneer entrepreneurial management program to new business (start-up) performance, mediated by mentoring frequency and moderated by mentoring quality, using Partial Least Squares-Structural Equation Model (PLS-SEM). Moreover, the study identifies Personal Entrepreneurial Competencies (PEC) of students and alumni of the pioneer entrepreneurial management program via survey as additional analysis. Results reveal that academic performance has a significant positive impact on new business performance with an f-square of 0.189, a medium effect size, and an r-square of 31.7% at the 1% level of significance, being mediated by mentoring frequency and moderated by mentoring quality. Mentoring frequency has a positive significant mediating impact between academic performance and new business performance at the 5% level of significance. As for mentoring quality, it has a positive significant moderating impact between academic performance and new business performance at the 10% level of significance. On the aspect of PECs, the survey results indicated that student-entrepreneurs had strong to moderate PECs but in need of more development in Systematic Planning and Monitoring. Surveyed alumni had mostly strong and some moderate PECs. The alumni showed higher scores with strong to moderate PECs.

Keywords: Entrepreneurial Management, mentoring, business performance, competencies, youth entrepreneurship

1. INTRODUCTION

Studies on the effectiveness of entrepreneurship training and programs based on business performance in small and medium enterprises (SMEs) have been on the rise. However, studies on the impact of a formal university entrepreneurship program on business performance are limited, likely due to confidentiality.

There are undergraduate programs in entrepreneurship wherein students are expected to have business plans and prototype products or services. In most cases, business performance is not assessed, as most undergraduate entrepreneurship programs are limited to the formulation of business plans and successful defense before a panel of experts. This study looks into a pioneer program in entrepreneurial management wherein undergraduate students have to propose a business idea, draft the business plan, then implement it and operate the business profitably for a year or two while still in university.

The novelty of the study, compared to others, is the context of student entrepreneurs who are still studying, engaging in mentoring, and running the business at the same time. As such, the study examines

what are the relationships among the key variables in the program that affect the business performance of young and budding entrepreneurs, with consideration of the mentoring effect. Looking into the personal entrepreneurial competencies of students and alumni was also used as a gauge for the impact of the entrepreneurship program.

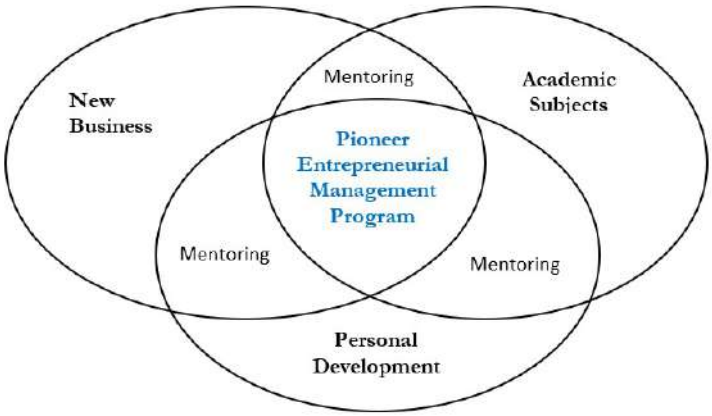
The interest in entrepreneurship education lies in the fact that the youth are the next generational wave who carry forward what has been established and build upon it. According to the 2020 Philippine Census, those aged 25 and under account for about 49.26% of the population. The youth in the Philippines are the majority, and it is imperative to help them develop and thrive in an ever-changing environment and to guide them properly on what they want to be.

The Pioneer Entrepreneurial Management Program (henceforth referred to as PEM or the program) in this study is also very clear on its mission to train the youth to be successful entrepreneurs. While there is a screening process before a student is accepted into the program, those who get in are put through the rigors of academic and business studies as well as personal development while undergoing mentoring. The success of the program has been an inspiration to finally examine the elements it deploys in nurturing young entrepreneurs.

Entrepreneurship can create value and bring about change in a society. Getting an entrepreneurial education has been a way in which a person can become an entrepreneur. While the teaching and assessment methods vary, the popular ones include a mix of classroom learning and hands-on experience by running an enterprise with the goal of developing entrepreneurial competencies. This study also looks into key competencies that the students are able to harness as they undertake the program.

The PEM program touts a blended learning approach of classroom lessons, business mentoring, and hands-on experience towards a holistic formation of youth entrepreneurs. The program takes inspiration from Jeffry A. Timmon's model of entrepreneurship, which centers on entrepreneurs as actors who seek opportunities, then shape them through gathered resources to capitalize on while taking on risks. The program's curriculum is best represented in the model displayed in the figure below, as it shows the confluence of the blended modality of learning in developing the students.

Figure 1. Curriculum Framework



A blended learning approach is used in the program as it takes advantage of diverse methods. The academic subjects include the liberal arts, business, economics, and management theories and frameworks. In terms of personal development, students are trained in various schools of thought and ethics to develop a critical eye, an analytical mind, and ethical judgment. Moreover, it also facilitates the cultivation of social skills like cooperation, communication, and values.

Mentoring is also a major part of the support structure for the students as they mature and go through the rigors of studies and the challenges of a start-up business. The program matches the students with mentors based on their preferred field of business, with the option to change mentors if a need for a better fit arises. Cross-mentoring is also done, where students can consult with other mentors in the program. The mentors are businessmen/practitioners who are seasoned experts who provide intense personalized business coaching and guidance through real business applications. The students are required to periodically meet with their mentors, who take notes and submit reports as part of progress monitoring, and this is tracked via metrics like mentoring frequency and mentoring grade.

In the new business track, the students in the program are taught how to spot opportunities, formulate business plans, and to comply with legal requirements in the registration and documentation of their chosen businesses. It is also in this track where the “rubber meets the road,” or where the learnings and theories are applied in an actual business start-up, as students are required to set up and implement their business plans. They are evaluated on how they apply their learnings, skills, leadership, and effective communication.

This study investigates two things. The first objective is to analyze the impact of the academic performance of students under the program’s entrepreneurial management curriculum on the new business performance in the early months or years of operations, as mediated and/or moderated by business mentoring, using PLS-SEM. The second objective is to identify Personal Entrepreneurial Competencies (PEC) of the student entrepreneurs.

2. REVIEW OF LITERATURE

2.1. Entrepreneurship Education

The importance of entrepreneurship has been gaining recognition in developing economies as subjects on the matter are being integrated into nationwide education systems. It is viewed as essential to successful socioeconomic development (Hasan et al., 2017, as cited in Mahmood et al., 2020). There have been studies citing how vital entrepreneurship education is for successful entrepreneurship or business performance due to the accumulation of acknowledgement and the development of entrepreneurship competencies (Kyari, 2020, as cited in Mahmood et al, 2020)

Entrepreneurship education is based on what an entrepreneur is envisioned to be. Generally, entrepreneurship education programs involve cultivating behaviors, developing skills and attitudes that help individuals and businesses to create, innovate, and sustain. The challenge for entrepreneurship education programs is how to structure and how to deliver their chosen content to promote entrepreneurial competencies and attitudes (Tam et al., 2009; Blenker et al., 2015). Moreover, there have been various studies citing the effectiveness of entrepreneurship education in equipping business management knowledge and skills (Mahmood et al., 2020).

The modality of delivery and the objectives of entrepreneurship education have been an area of lively discussion. Most papers, in their examination of entrepreneurship curriculum, have found that the teaching and assessment methods vary (Falkäng and Alberti, 2000). Nevertheless, the most recommended approach to teaching involves immersion – learning by doing and learning from doing (Fayolle and Kyrö, 2008; Lackéus, 2013; Morris et al., 2013; Ollila et al., 2011, as cited by Williams-Middleton et al., 2022). Student engagement in entrepreneurial activities is geared towards gaining experiential knowledge and developing entrepreneurial competencies (Williams-Middleton et al., 2022).

Literature on it also covers assessment and feedback on entrepreneurial courses, the impact on society, as well as successes in contributing to students' entrepreneurial competencies and attitudes. Assessment and feedback in higher education practice-based entrepreneurship courses help build legitimacy, as it is unlike traditional courses (Warhuus et al., 2018). While entrepreneurship education has measurable outcomes, the efficiency of entrepreneurship education is difficult to measure (Nasr & Boujelbene, 2014).

Many authors have stated that there is a lack of research on how to measure the success of entrepreneurship education. There are a variety of tools and methods of assessment given the complexity and lack of a harmonized approach in the content, structure, and delivery of entrepreneurship education. It is a growing field of study where some studies examine the conventions in entrepreneurship education based on impact assessment, while others are specific course evaluations.

Assessing entrepreneurship programs is challenging given the differences in context such as the target group, objectives, content, length, and location, which have economic and social factors among others (Glaub & Fresem, 2011; McKezie & Woodruff, 2013, as cited in Ismail, 2018). Most assessments would end with just the business plan viability and not see through the implementation and actual operation of said plan.

2.2. Timmons' Model of Entrepreneurship

For the PEM program, the vision of what an entrepreneur is takes inspiration from Timmons' model, thus serving as an important underpinning theory of the BSEM curriculum. It was developed by Jeffry A. Timmons in his doctorate thesis at Harvard University in 1971 and later expanded on in the textbook New Venture Creation, co-written with Stephen Spinelli Jr. and later, Rob Adams. Timmons' model centers on the entrepreneur who seeks opportunities, shapes the opportunity by gathering the resources and manpower to capitalize on the opportunity, while taking risks on himself. It also takes on a view of a "no risk, no reward" system for the entrepreneur. The three critical factors in the model are the market-driven opportunity, the team, and adequate resources, which are all interlinked, and changes in one will affect the other two.

Timmons' model of entrepreneurship starts with opportunity, wherein a good business opportunity is rooted in products and services that create value for consumers and address factors underlying market demand. A viable business opportunity then would be ready to go through the process of building the business plan and financing for it.

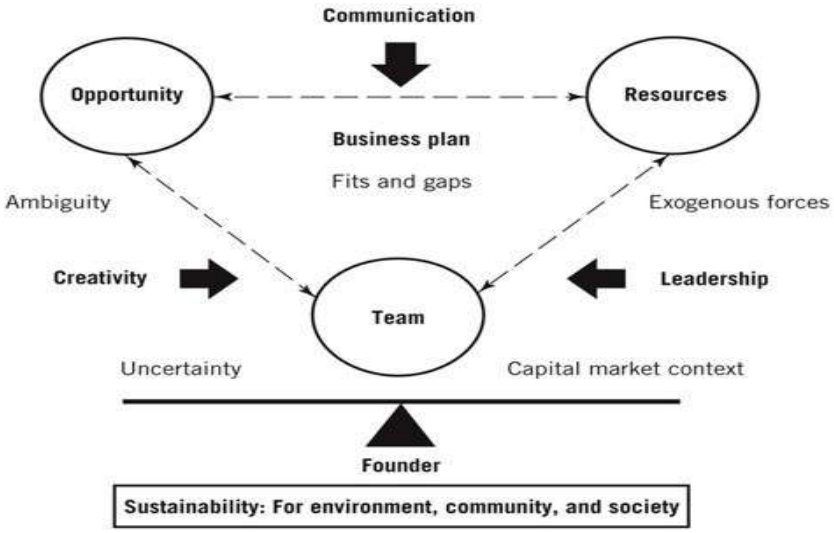
Part of the planning process is gathering the resources and putting together the team, the magnitude and nature of which depends on the opportunity identified. The team is a key factor in Timmons model that greatly determines the success of the business. A good team can maximize the potential of the opportunity being pursued, while a bad team can waste it.

The team's role is to remove uncertainty and ambiguity through the application of skill, talent, and creativity. It is also the source of leadership on how to manage the resources gathered against changing external factors and the capital market. It depends on the entrepreneur to put together a good team, and while there may be far from ideal teams put together, the entrepreneur should step up to guide the team members towards excellence.

In terms of resources gathered, Timmons model encourages starting with just enough to address the minimum requirements to gain competitive advantage. Doing so would help lower market costs, promote frugality and discipline in the organization, as well as encourage creativity to achieve more with less. A business with good potential and good management will always be an attractive prospect; hence, it will not struggle to find resources and money.

The entrepreneur builds a good base of resources to draw from and builds a business plan that fits and balances these resources with the potential of the opportunity and capabilities of the team. While there may be mismatches or inadequacies among the three factors, it is up to the entrepreneur to mitigate them through leadership, creativity, and effective communication.

Figure 2. Timmons Model



Source: Timmons and Spinelli, Jr. (2009, p.110)

2.3. Mentoring

According to Eric Parsloe from the Oxford School of Coaching and Mentoring (as cited in Gillich & Chioncel, 2014), "mentoring is to support and encourage people to manage their own learning in order that they may maximize their potential, develop their skills, improve their performance and become the person they want to be." Mentoring also allows for the transfer of competencies, skills, and abilities not typically acquired through the classical education system, as it allows for learning in a non-assessed/non-threatening environment (Gillich & Chioncel, 2014). Aspiring entrepreneurs face several challenges involving unfamiliar tasks that can be very costly when done incorrectly or sub-optimally. The mounting pressures from a business and personal aspect can be more manageable with the support of a mentor who promotes the mentee's personal development.

In a study by Agbonna (2022), it was found that mentoring is an important factor in predicting attitude towards entrepreneurship while learning it. Another study by Coers et al (2021) highlighted the integral role of mentoring in leadership development in professional, educational, and formative experiences. Additionally, Whitney et al. (2011) found that high-quality mentoring is significantly related to increasing self-esteem, fewer alcohol problems, and becoming less depressed for mentees. Moreover, mentoring has been found to help improve positive youth development (Whitney et al., 2011). These studies lend credence to the importance of mentoring in entrepreneurship education and practice.

2.4. Personal Entrepreneurial Competencies

Developing entrepreneurial competency is one of the main goals of an entrepreneurship education. This is to improve the likelihood of success and growth of a business amidst competition. A critical aspect in developing and nurturing entrepreneurship potential is the identification of specific and observable behaviors associated with successful entrepreneurship.

One of the most popular personal entrepreneurship competency classifications was a self-rating questionnaire made by the Management Systems International (MSI) in partnership with McBer and Company in 1989. Their research identified ten Personal Entrepreneurial Competencies (PECs) and behavioral indicators useful for detecting and strengthening entrepreneurial potential.

The PECs are as follows[5]:

(1) Opportunity Seeking
   a. Does things before being asked or forced to by events
   b. Acts to extend the business into new areas, products, or services
   c. Seizes unusual opportunities to start a new business, obtain financing, equipment, land, workspace, or assistance.

(2) Risk Taking
   a. Deliberately calculates risks and evaluates alternatives
   b. Takes action to reduce risks or control outcomes
   c. Places self in situation involving a challenge or moderate risk

(3) Demand for Quality and Efficiency
   a. Finds ways to do things better, faster, or cheaper
   b. Acts to do things that meet or exceed standards of excellence
   c. Develops or uses procedures to ensure work is completed on time or that work meets agreed-upon standards of quality.

(4) Persistence
   a. Takes action in the face of a significant obstacle
   b. Takes repeated actions or switches to an alternative strategy to meet a challenge or overcome an obstacle
   c. Takes personal responsibility for the performance necessary to achieve goals and objectives.

(5) Commitment to Work Contract
   a. Makes a personal sacrifice or expends extraordinary effort to complete a job
   b. Pitches in with workers or in their place to get a job done.
   c. Strives to keep customers satisfied and places long-term goodwill over short-term gain

5 Management Systems International (1989). The Entrepreneurship Development Program. Retrieved from *http://unpan1.un.org/intradoc/groups/public/documents/un/unpan002601.pdf*

(6) Information Seeking
   a. Personally seeks information from clients, suppliers, and competitors
   b. Does personal research on how to provide a product or service
   c. Consults experts for business or technical advice

(7) Goal Setting
   a. Sets goals and objectives that are personally meaningful and challenging
   b. Articulates clear and specific long-range goals
   c. Sets measurable short-term objectives

(8) Systematic Planning and Monitoring
   a. Plans by breaking large tasks into time-constrained sub-tasks
   b. Revises plans in light of feedback on performance or changing circumstances
   c. Keeps financial records and uses them to make business decisions

(9) Persuasion and Networking
   a. Uses deliberate strategies to influence or persuade others
   b. Uses key people as agents to accomplish own objectives
   c. Acts to develop and maintain business contracts

(10) Independence and Self-Confidence
   a. Seeks autonomy from the rules or control of others
   b. Sticks with own judgment in the face of opposition or early lack of success
   c. Expresses confidence in own ability to complete a difficult task or meet a challenge

The self-assessment questionnaire was developed to evaluate how a person fares in the 10 PECs based on 55 questions/items that are rated in accordance with one's attitude and personal beliefs.[6] The MSI-McBer and Company study found that these PECs hold across cultures and settings, are actionable and are not simply passive traits. Moreover, how well a person does as an entrepreneur can be projected based on how these PECs are manifested by the individual (Reyes et al. 2018, as cited in Kyguoliene and Svipas, 2019).

3. RESEARCH DESIGN, FRAMEWORK, AND METHODOLOGY

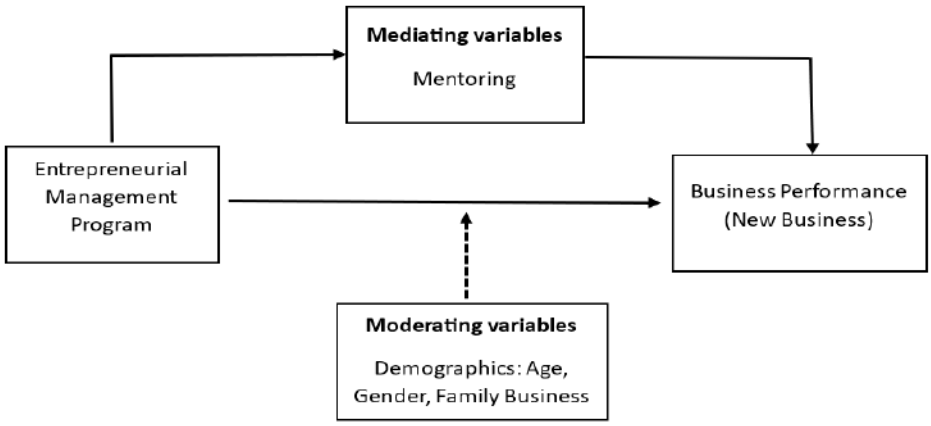
The following is the guiding approach for the analysis of the impact of entrepreneurship education on new business performance:

The study has a confirmatory and exploratory research design wherein the theory of entrepreneurial management program curriculum having a positive impact on new business performance, as mediated and/or moderated by business mentoring, is statistically significant or not. The data used were based on the available records at the time it was conducted. Compared to known literature in assessing entrepreneurship education, this study conducted a relationship analysis using student data on their

6 See: PEC Self-Rating Questionnaire. Available at https://beta.entrepreneurship.org.ph/wp-content/uploads/2018/08/Download-PECs-Self-Rating-Questionnaire-1.pdfexamined

academic performance, personal development, mentoring engagement, and new business (start-up) performance. Moreover, the researchers also examined the competencies that the student entrepreneurs are honing as they undergo the program via a survey.

Figure 3. Conceptual Framework



Source: Authors

As seen in the diagram above, the researchers would like to assess the impact of academic performance under the PEM program on the new business (start-up) performance of the undergraduate students, as mediated by mentoring and moderated by demographic factors and family business existence. The research hypotheses the researchers aim to assess are as follows:

- Academic performance under the PEM Program has a positive significant impact on the new business performance.
- Academic performance under the PEM program has a positive significant impact on the new business performance as mediated by mentoring.
- Academic performance under the pioneer entrepreneurial management program has a positive, significant impact on the new business performance as mediated by mentoring and moderated by demographic factors and family business existence.

The study used both qualitative and quantitative methods to analyze the impact of the pioneer entrepreneurial management program in shaping its students' new business performance. Quantitatively, analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) due to the small sample size and some measurement in terms of scales involved. PLS-SEM is a multivariate method that is typically used for theory development. It can be used for confirmatory and exploratory research design. It is widely applied in various social science disciplines such as those related to management (Hair et al., 2018). It focuses on the predictive ability of the model in explaining the variance in dependent variables, estimating path coefficients, and maximizing the goodness-of-fit measure of the target construct.

For the quantitative assessment, the available data of 128 students were used in the PLS-SEM, where the dependent variable is the students' business performance and the independent variables are their average academic grade and personal development course performance, as mediated by mentoring attendance, mentoring quality[7], and moderated by gender, age, and whether the student has a family business or none.

The sample size falls in line with the guidelines of the Sample-to-Item ratio, wherein the sample size in relation to the number of items in a study should not be less than 5-to-1 (Gorusch, 1983; Hatcher, 1994; Suhr, 2006). The sample size is also in accordance with the Sample-to-Variable ratio, wherein the minimum is 5:1, though ratios of 15:1 or 20:1 are preferred (Hair et al, 2018).

To ensure robust statistical results, the proponents utilized bootstrapping as a nonparametric procedure that can be used to test the statistical significance of the PLS-SEM, such as the path coefficients, r-squared, outer weights, and Cronbach's alpha, among others. Subsamples under bootstrapping were set to 5,000, with 5% level of significance set up.

In the pioneer entrepreneurial management program, business performance is measured in the New Business grades[8] of the students. The students are prepared through academic subjects delving into business theory, concepts, case studies, as well as the liberal arts. Personal development studies are also a series of courses within the program that develop critical thinking, values, and ethics. Business mentoring is also another major aspect of the program where mentoring attendance and mentoring interaction factor in.

These are the factors considered as variables/constructs in the PLS-SEM in checking the impact of academic performance under the PEM Program on new business performance, as mediated by mentoring and moderated by age, gender, and background of having a family business on business performance and how they interplay with each other.

7 Based on a satisfaction rating of the undergraduate students under the PEM Program on his/her experience and learnings during business mentoring sessions.

8 The New Business grade consists not only of financial indicators (e.g. margin, revenue, income, etc.) but also other criteria on how to properly run an enterprise.

Qualitatively, the study is supplemented with survey results of students and alumni regarding their perceptions of the said program and their Personal Entrepreneurial Competencies (PEC). The PEC is a popular self-rating questionnaire used to assess behavioral indicators useful for detecting and strengthening entrepreneurial potential (see Review of Literature section 2.4).

For the survey data collection, it was conducted online for ease of access and communication/feedback with respondents via Google Forms. A unique email address issued by the PEM's institution was used to ensure one-time-only answers for the students and ensure that the respondents are from the PEM.

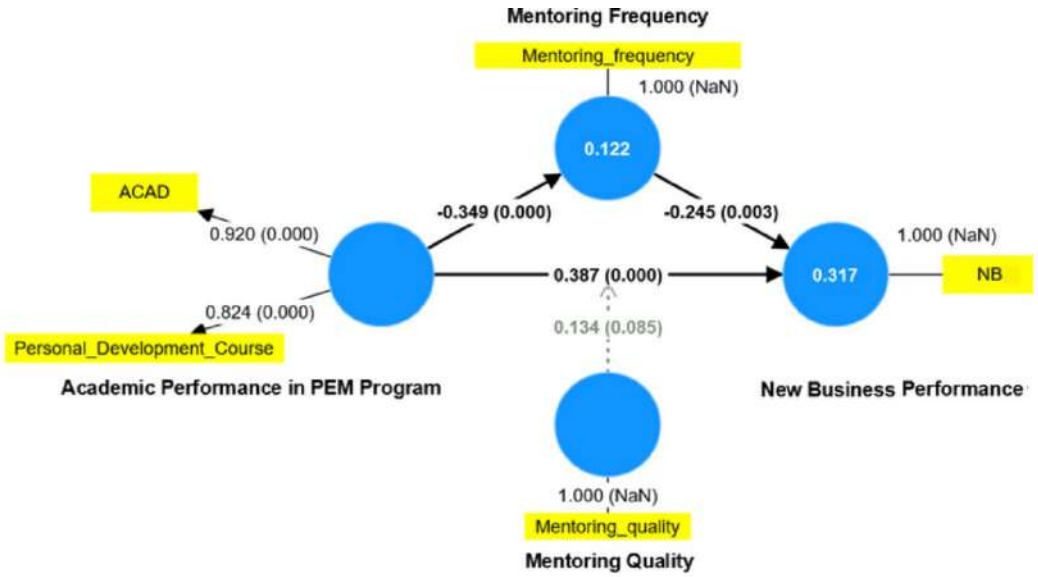
For the alumni, they were required to answer the survey with an email address that was easily verifiable in the alumni database of the PEM program. From Google Forms, the survey answers were compiled, downloaded, and processed using Microsoft Excel.

4. RESULTS AND FINDINGS

4.1. Quantitative Analysis

After some alterations and preliminary required assumption assessments (See Annex Tables 1 and 2) on the constructs and variables of the PLS-SEM model, there are insignificant variables that were removed from the initial model. These were gender, family business existence, and age. While mentoring quality, which was originally part of the mentoring construct, was found to be a moderating factor rather than a mediating factor. The mentoring frequency or count is confirmed to be a significant mediating factor. The academic track and personal development series (PDS) track, as part of the overall academic curriculum, under the academic performance in the PEM Program construct, are both significant factors affecting the new business performance (see Annex Tables 3-6 for the Results of the PLS-SEM).

Figure 4. PLS-SEM Model



Note: Analysis was conducted using SmartPLS Software (version 4) SmartPLS: Ringle, C. M., Wende, S., and Becker, J.-M. 2022. "SmartPLS 4." Oststeinbek: SmartPLS GmbH, http://www.smartpls.com

The following are the key findings and interpretations that also confirmed some of the hypotheses of the study:

1. The Academic Performance in the PEM Program has a significant direct positive impact on new business performance
2. The mentoring frequency has a positive and significant mediating impact between the academic performance under the PEM Program and business performance.
3. The mentoring quality has a positive and significant moderating impact at the 10% level of significance.

The higher the academic performance (which indicates 3.5 to 1.0 numerically), the more they attend business mentoring sessions. More business mentoring sessions translate to higher or better business performance, as indicated by -0.245 with a p-value of 0.003 in the diagram.

The overall r-square of the model is 31.7%, which indicates that the model can explain the relationship among the variables, given mediating and moderating variables, at about a 30% rate of predictive power. Nonetheless, it is more important to look at the Effect Size (f-square), which measures the impact of the exogenous construct on the endogenous one. The desired level is f-square > 0.02. The following are the indicative thresholds for Effect Size (f-square) as proposed by J. Cohen (1988): A value below 0.02 represents no effect, 0.02–0.15 represents a small effect size, 0.15-0.35 a medium-sized effect, and above 0.35 a large effect size. Based on the results, the f-square has a medium-sized effect with regard to the impact of Academic Performance in the PEM Program on new business performance.

The impact of Academic Performance in the PEM Program on mentoring frequency has a small effect size, as does the impact of mentoring frequency on new business performance. The moderating effect of mentoring quality is also found to have a small effect on new business performance. Mentoring quality, in terms of ratings by mentees, has no effect on new business performance. This could probably be due to well matching of business mentors to the mentee process and/or that business mentors in the PEM Program are mostly, if not all, rated at close scores.

These results confirm the positive relationship of business mentoring sessions in terms of quantity and quality and business performance underpinned by the academic curriculum of the PEM Program. As such, the PLS-SEM results validate the PEM Program, which is built on the 3 main tracks of academic performance, personal development, and new business performance supported by mentoring towards the development of young entrepreneurs.

4.2. Qualitative Analysis

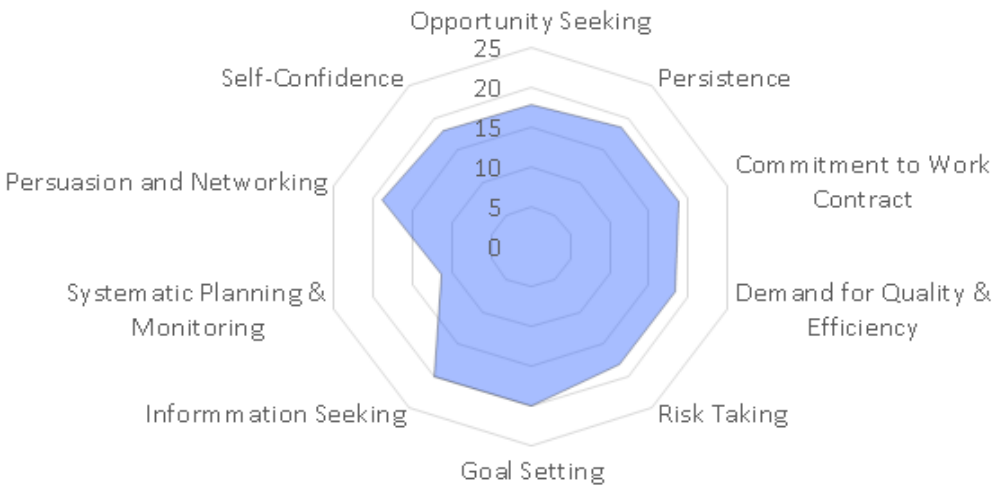
For data gathering from alumni, considering the difficulties contacting the older alumni, the study focused on surveying graduates from 2002 to 2019 (See Annex Table 7). The standard Personal Entrepreneurial Competencies survey via Google Forms was sent out to the alumni, and out of the 542 who graduated between 2002 and 2019, there were 161 respondents (29.7% response rate).

For data gathering from students, all PEM students during the school year 2019-2020 were surveyed similarly to the alumni, where a total of 82 respondents from all year levels responded with a 100% response rate.

For the PEC Results, the survey answers were computed for the average corrected scores of the alumni and PEM students per MSI-McBer calculation instructions. It was interpreted using the method of Depositorio et al. (2011), which rated average corrected scores of 19 and above as strong, 16-18 as moderate, and 15 and below as weak.

Based on MSI's PEC survey, PEM students were found to be strong or moderately strong in all the personal competencies but were found to be below the 12.5 average or median score and weak in Systematic Planning and Monitoring. In terms of the strengths, PEM students' scores indicated that their PECs were strong in Information Seeking and Goal Setting. Their scores in Persuasion and Networking, Commitment to Work Contract, Persistence, Demand for Quality & Efficiency, Risk Taking, Self-Confidence, and Opportunity Seeking were rated as moderate PECs (see Annex Table 8 with corresponding average corrected scores and a visualization in Figure 5).

Figure 5. PEM Students' Personal Entrepreneurial Competencies Profile

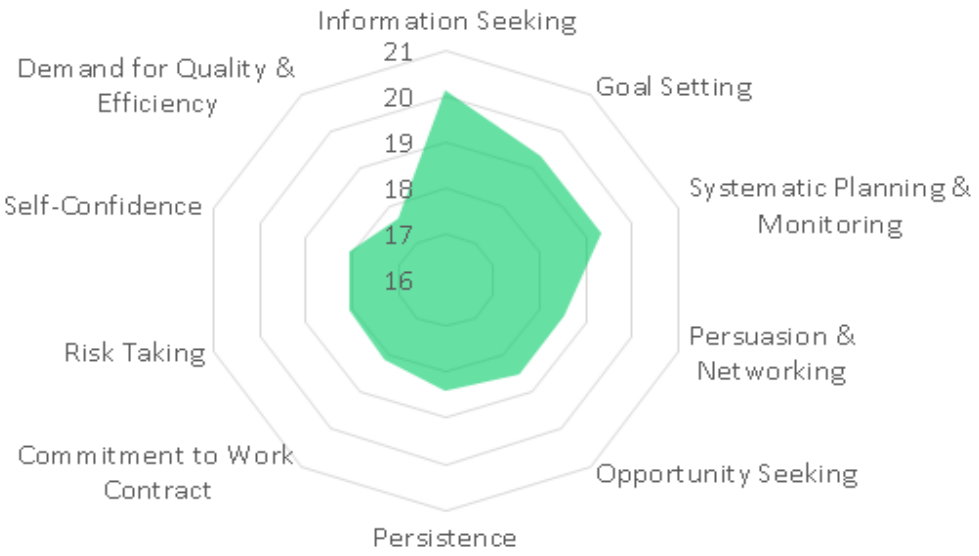


Most correlations between PECs are positive on the low to moderate side, while the others are negligible (See Annex Table 9). However, in terms of the below-median rating in the Systematic Planning and Monitoring Competency, this can be moderately affected by Persistence, Demand for Quality and Efficiency, Goal Setting, and Information Seeking.

Based on MSI's PEC survey, PEM alumni were found to be strong in all the personal competencies as they were all above the 12.5 average/median. In terms of the strengths, PEM alumni scored the highest in Information Seeking. This was followed by Goal Setting, Systematic Planning and Monitoring, Persuasion and Networking, Opportunity Seeking, Persistence, Commitment to Work Contract, Risk Taking, Self-Confidence, and Demand for Quality & Efficiency (see Annex Table 10 with corresponding average corrected scores and a visualization in Figure 6).

The alumni average PECs have moderate to strong ratings. Compared to the results of students' average PECs, the alumni were strong in Systematic Planning & Monitoring.

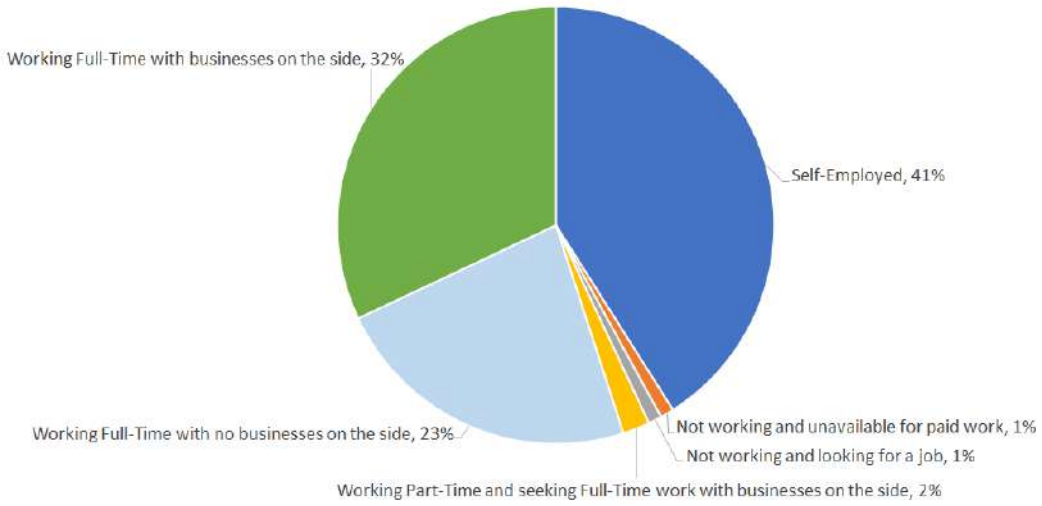
Figure 6. PEM Alumni's Personal Entrepreneurial Competencies



The results of the PEC surveys indicate that students and alumni of the PEM program developed the key characteristics of an entrepreneur per Timmon's Model of Entrepreneurship. The very model that inspired the PEM program to mold those who undertake it to learn how to spot opportunities (Opportunity Seeking), gather people and resources through creativity (Information Seeking), leadership (Self-Confidence, Risk Taking, Commitment to Work Contract, Persistence), and communication (Persuasion & Networking).

Among the surveyed alumni, about 75% answered that they were engaged in businesses of their own. These were spread out among 40.4% who were self-employed, 32.3% who had full-time jobs with businesses on the side, and 1.9% who had part-time work and were seeking full-time work with businesses on the side.

Figure 7. PEM Alumni Engaged in Business



In terms of the types of businesses they were engaged in, Food & Beverage was the most common, followed by Fashion (apparel-related), Retail/Trade and Real Estate. Based on the survey, the average number of businesses per alumnus was about 1.28, which were mostly under the category of micro, small, and medium enterprises (see Annex Table 11).

In terms of location, about 94% of alumni respondents live within the Philippines, while 6% have gone abroad. Among those in the Philippines, 80% were in Metro Manila while 20% were outside of the area. In addition, the businesses of the surveyed alumni were located in the Philippines (99% of respondents), where a majority (161 out of 204 or 78%) were in Metro Manila (see Annex Tables 12 and 13). The statistics on the location of PEM alumni business operations support the importance of teaching entrepreneurship education, as their businesses contribute to Philippine economic growth and development.

5. CONCLUSIONS

It has been explored and confirmed in this study that the academic performance under the pioneer entrepreneurial management program has a significant and positive impact on new business performance, as mediated by business mentoring frequency and moderated by business mentoring quality. Among the key constructs, academic performance under the PEM Program has the largest impact on new business performance. Based on f-square, it has a medium-sized effect. The mediating and moderating factors have a significant positive impact on new business performance, with a small effect based on f-square. Gender, age, and having a family business or not are found to be not statistically significant in the overall model and as moderating factors.

On the aspect of competency identification, the survey results indicated that students of the pioneer entrepreneurial management program had strong and mostly moderate scores in all the personal entrepreneurial competencies except being below the median in Systematic Planning and Monitoring. This indicates an opportunity for these students to enhance their entrepreneurial competencies further to become more competitive and facilitate their readiness towards entrepreneurship. On the other hand, the alumni, which included those who graduated just less than a year prior had ratings of moderate and strong for all personal entrepreneurial competencies.

The qualitative (PEC Survey) and quantitative (PLS-SEM) results validate the structure of the PEM program that features academics, new business performance, and personal development, with the support of mentoring in developing entrepreneurial characteristics as inspired by Timmon's Model of Entrepreneurship.

Overall, entrepreneurship education is both art and science. The science aspect comes from the theories and frameworks of business and management. The art is mostly in the approach of the mentors who become invested in the development of the students. The mentoring discipline must go both ways, where there is interest and effort from both parties. This is reinforced in the program with the metrics on mentoring frequency and quality.

6. LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

The study made use of available data on students and survey respondents and can be further extended to a longer period of coverage over time as more data comes along. Other statistical techniques can also be explored to further examine the variables used in the study. Taking note of future curriculum updates, among other changes are also important for future research. In addition, the study can be expanded to examine the progress of the students' businesses after they graduate.

7. CONFLICTS OF INTEREST

There are no conflicts of interest to declare.

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TECHNOLOGY ADOPTION AND DIGITAL ENTREPRENEURSHIP

An Exploratory Study On Establishing An Online Marketplace Platform For MSMEs

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ABSTRACT

The study explored the opportunities for the development of an online marketplace platform for MSME clients of a micro-finance institution in the Philippines. No research was done yet on exploring potential and preference for the digitalization of MSME services in the Philippines. Thus, this study identified the readiness of clients and the market in utilizing the digital space and assesses opportunities for the potential shift to online selling strategies. Both quantitative and qualitative research were used for the study. Key informant interviews were utilized to gather data from merchants and purchasers from Luzon, Visayas, and Mindanao. Meanwhile, existing merchants and purchasers of an ongoing Facebook selling group, as well as potential merchants and purchasers from highly urbanized cities (HUCs) were surveyed. Results showed that although there is potential for MSMEs to expand in an online-selling platform, limitations in capacity and resources need to be resolved first. MSME respondents were mostly only familiar with navigating Facebook and Messenger among available online platforms. They also expressed that familiarity does not equate to comfortability in the digital space. With a website/app that is user-friendly said to be their new platform preference. It is recommended to venture into other online market platforms like Shopee, Lazada, and Facebook Marketplace, as an alternative to expand their online presence rather than creating a new online application. Purchasers, meanwhile, expressed interest in supporting MSMEs in this venture. Results of the study can be utilized as a basis in organizing initiatives that will be provided to MSMEs especially in the digitalization of their services. It can also be basis on the preferences of purchasers from merchants in an online-selling platform.

Keywords: digitalization, MSMEs, online marketplace platform, online selling .

1. INTRODUCTION

The worldwide rise in COVID-19 cases has profoundly impacted multiple facets of society (Cueto et al., 2022). One severely affected aspect has been the economy, with the widespread enforcement of quarantine measures leading to substantial disruptions in economic activities, supply chains, and business operations (Francisco et al., 2020). In the case of the Philippines, 70.6% of MSMEs (Micro, Small, and Medium Enterprises) are forced to temporarily close their operations due to the outbreak, with almost 60% experiencing a complete loss of income during the lockdown period (Flaminiano et al., 2021). MSMEs in the country play a crucial role as the backbone of the economy, constituting a significant 99% of registered businesses in the nation offering employment to around 60% of Filipino workers, and contributing a substantial 35.7% to the economy's value (Khatibi, 2021). Thus, making their potential decline a matter of serious concern given their pivotal economic contribution.

Shifting to online commerce is viewed as the most potent strategy for MSMEs to navigate the challenges posed by the COVID-19 crisis (Rizkinaswara, 2021). Creating a digital marketplace and payment infrastructure becomes imperative for the survival of MSMEs during this pandemic (Nadia, 2022). In the Philippines, common online platforms used include but are not limited to Shopee, Lazada, Zalora, YouTube, Facebook, Instagram, and TikTok (Smith, 2016; Duffy & Pruchniewska, 2017). These platforms offer affordable and alternative avenues for small businesses to enhance their visibility in larger markets, establish brand recognition, and broaden their customer base (Duffy & Pruchniewska, 2017). Within these marketplaces, consumers enjoy the convenience and wide range of goods available (Duch-Brown et al., 2017), while businesses gain advantages in efficiency, market positioning, and credibility (Rask & Kragh, 2004). However, digital transformation may not be easy for some enterprises because it means investing in infrastructure, equipment and devices, software, and technical know-how (Bayudan-Dacuycuy & Dacuycuy, 2022).

Most of the MSMEs acquired their capital from microfinance institutions which have emerged as an alternative source of financial services, complementing the role of commercial banks (Narayan, 2014). These institutions not only provide services that enhance their financial stability but also services that uplift operational capacity (Ayopo & Ibidunni, 2015). With the existing concerns faced by MSMEs, it is essential for MFIs to explore avenues that will strengthen MSME client's capacity to adapt to digitalization. Hence, this study will be conducted to explore opportunities for the potential development of an online marketplace platform for MFIs MSME clients, as well as identify the level of acceptability, willingness, and comfort in utilizing digital space and their preferences for an online selling platform.

2. OBJECTIVES

The project generally aims to explore the possibility of establishing an online marketplace platform for existing MFI merchants. Specifically, it aims to:

1. Identify the profile of the merchants and purchasers.
2. Determine the potential merchants' and purchasers' level of acceptability, willingness to pay for service fees, and comfort in utilizing the digital space.
3. Know the potential merchants' and purchasers' preferences in an online selling platform; and
4. Provide recommendations for existing MFI merchants of the potential establishment of an online marketplace platform.

3. REVIEW OF RELATED LITERATURE

3.1. Micro, Small, and Medium Enterprises (MSMEs) in the Philippines during Covid-19 Pandemic

In the Philippines, a staggering 99.51% of the 957,620 registered businesses are represented by MSMEs, leaving a mere 0.49% for large businesses (DTI, 2021). With MSMEs comprising a significant 99% of registered businesses in the nation, they play a pivotal role in offering employment to around 60% of

Filipino workers and contribute a substantial 35.7% to the economy's value (Khatibi, 2021). Nonetheless, they often struggle to handle crises and disasters, often lacking sufficient readiness for unexpected events like pandemics and disasters (Scarinci, 2016).

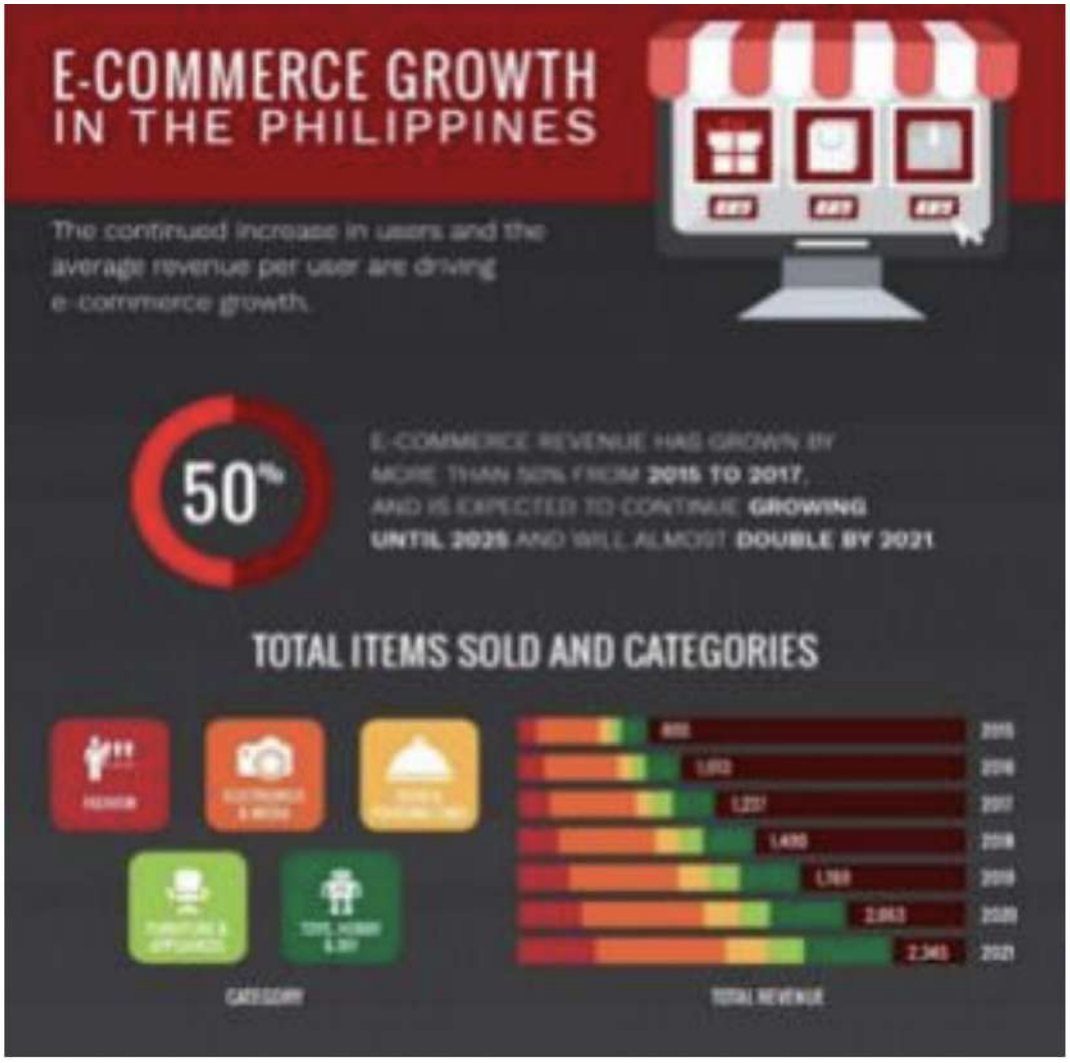
As COVID-19 swept across the globe, a study conducted by the Asian Development Bank's Economic Research and Regional Cooperation Department (ERCD) revealed that a significant 70.6% of Philippine MSMEs are forced to temporarily close their operations due to the outbreak, with almost 60% experiencing a complete loss of income during the lockdown period (Flaminiano et al.,2021). Nevertheless, the pandemic has created an opportunity for businesses to showcase their agility by embracing digital transformation and offering goods and services online. Enterprises that have wholeheartedly adopted e-commerce and embraced digitization have experienced a surge in sales, capitalizing on the escalating preference for online shopping among consumers during quarantine measures (World Trade Organization, 2020)

3.2. Digitalization of MSMEs

In recent years, several studies argued about circumstances and reasons that facilitate the digital transformation of businesses and public policies that support this phenomenon given its impacts on job creation and economic growth (Sahut et al. 2019). According to a 2018 study conducted by Bain and Co., only 16% of MSMEs in ASEAN are truly digitalized. All digitalized MSMEs can be categorized into three levels: 56% Basic (facilitate
communication and operations), 34% Intermediate (aid sales and marketing), and 10% Advanced (sophisticated digitalization applied in various aspects of their business). Essentially, even among the minority of MSMEs that are digitalized, most do not utilize digital tools to its full capability. E-commerce (i.e., buying and selling products and services online) is still not widely adopted among consumers in the Philippines before the pandemic (Statista, 2021a) and almost four-fifths of MSMEs experienced a low level of digital payment system adoption (Flaminiano et al., 2021).

In 2020, e-commerce spending among internet users in the Philippines grew at an astounding rate. E-commerce expenditures on the food and personal care industry grew by 64.3% compared to the previous year (Flaminiano et al., 2021) and had a considerable spike in the use of e-wallets such as GCash and Paymaya (Endo, 2020). The volume and value of transactions facilitated by electronic fund transfer (EFT) services such as PESONet and Instapay have also increased dramatically since the pandemic (BSP, 2020). The reduction of face-to-face contact abruptly increased the shift of societal and economic activities into digital platforms, including digital entrepreneurship (Dannenberg et al. 2020). COVID-19 pandemic proved to be an enabler which influenced the consumers' habits and organizations' innovation programs leading to accelerated digital transformation of MSMEs and large firms (Gavrila Gavrila & De Lucas Ancillo 2021; del Olmo-García et al. 2023).

Figure 1: *Abeabe, P.J.J., Maro, M.M. G., & Ramos, R. (2022). "A Descriptive Study About the Effectiveness of E-commerce in the Philippines".*



Although SME entrepreneurs recognize the significance of digitalization, realizing its full potential is impeded by various limitations, notably those related to financial and human resources (OECD, 2018). The level of digitalization adaptation varies significantly among countries, with multinational corporations clearly taking the lead compared to SMEs. Less developed nations tend to be more hesitant to embrace these changes due to financial limitations and a lack of confidence in the potential returns from digitalization. Moreover, fear regarding digital knowledge and security further compounds these challenges (Khai et al., 2020). In Chen (2016) publication, he highlights that the effects of digitalization are observed in the short term, resulting in improved productivity and efficiency. However, a more significant concern arises regarding the long-term uncertainty it poses. The slow adoption of digitalization by SMEs is further compounded by the challenge of human capital employability, as existing employees may resist change due to concerns about potential replacement in the digital era.

3.3. Online Marketplace in the Philippines

In recent decades, online shopping has become important for businesses to grow. This change from physical stores to digital platforms happened quickly (Gan et al., 2022). Digital platforms are like online marketplaces where both individuals and businesses can come together to seize opportunities and interact (Bayudan-Dacuycuy & Dacuycuyy, 2022). A notable emergence in this regard is the retail platform, often referred to as capital markets. These platforms play a vital role in facilitating the exchange of goods in the market (Ching et al., 2021). Globally, Amazon and eBay stand as prominent retail platforms. Yet in specific regions like the Philippines, Shopee, Lazada, and Zalora take the spotlight (Smith, 2016).

Aside from using these retail platforms, utilizing social media has also played an important role in marketing and selling the product. As mentioned in the report of Bayudan Dacuycuy & Dacuycuy (2022), the top social media platforms among Filipino internet users are YouTube (used by 97.2% of all users), Facebook (96.8%), Facebook Messenger (92.1%), Instagram (73.4%), Twitter (62.7%), and TikTok (48.8%). These platforms offer affordable and alternative avenues for small businesses to enhance their visibility in larger markets, establish brand recognition, and broaden their customer base (Duffy & Pruchniewska, 2017).

Within these marketplaces, consumers enjoy the convenience and wide range of goods available (Duch-Brown et al., 2017), while businesses gain advantages in efficiency, market positioning, and credibility (Rask & Kragh, 2004). Online marketplaces have been around for a while, but the pandemic sped up the use of digital solutions for business survival. This has enabled companies to handle transactions remotely, streamline deliveries, access financial services, and connect with both new and current customers (Karr et al., 2020). Nevertheless, for certain businesses, embracing digital transformation can pose challenges since it involves investment in infrastructure, equipment, software, technical expertise, and know-how (Bayudan-Dacuycuy & Dacuycuyy, 2022).

3.4. Role of Microfinance in MSMEs

In recent times, microfinance institutions have emerged as an alternative source of financial services for microenterprises, complementing the role of commercial banks that provide funding to a wide range of enterprises (Narayan, 2014). The core objective of these financial services is to empower the poor enabling them to enhance their financial stability. This, in turn, opens avenues for seizing entrepreneurial prospects and facilitating the expansion of their businesses (Firdaus & Kamello, 2020). These institutions also offer nonfinancial services, effectively uplifting the operational capacity of MSMEs. These encompass an array of provisions, notably advisory services, managerial and technical training, regular gatherings, and comprehensive pre-loan guidance. These robust support services are thoughtfully designed to empower and uplift MSMEs (Ayopo, & Ibidunni, 2015). This underscores the vital role that the microfinance sector fulfills in elevating MSMEs.

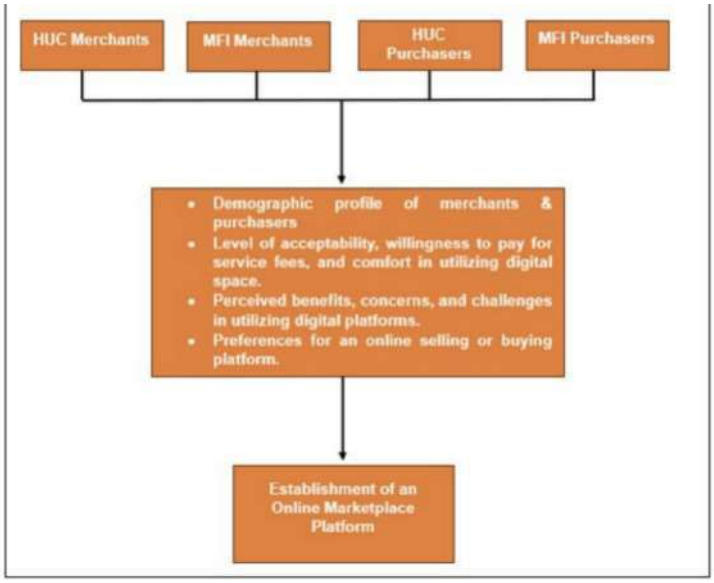
MFIs are not only financial entities but also instruments of development enablers, amplifying their impact beyond traditional banking. As the concept of social intermediation emerged which encompasses the formation of groups, establishment of networks, and enhancement of capabilities through training in financial literacy, bookkeeping, and business management for their group members (Wairimu, &

Mwilaria, 2017). This transformation redirects the focus of MFIs from mere financial security to a broader concept of social security. Anchored in the foundation of 'trust', MFIs successfully cultivate group cohesiveness through strategic networking. As a result, group members reap a multitude of advantages, spanning beyond boundaries, such as cost-effective marketing, dissemination of knowledge, and heightened awareness of opportunities (Hans, 2009).

4. CONCEPTUAL FRAMEWORK

The diagram presents the conceptual framework underpinning the study, which aims to delve into the dynamics between merchants and purchasers in both highly urbanized cities and microfinance institutions. The scope of data encompasses a wide array of factors: from respondents' demographic profile to their level of familiarity and comfortability with digital spaces as well as their perceived benefits, concerns, and challenges when utilizing digital platforms. Furthermore, their preferences within an online marketplace will be explored. With this, the collected data will be used as the foundation for devising strategies that empower MSMEs under MFIs in their digitalization endeavors. Ultimately, this will potentially culminate in the creation of an online marketplace platform tailored to the specific preferences and requirements of the target market.

Figure 2. Conceptual Framework



4.1. Definition of Terms

HUC Merchants - Merchants from highly urbanized cities (HUCs) operating and where logistical means are accessible and can cater to same-day deliveries (Grab, Angkas, Lalamove, Suki, Delivery, Happy Move, etc.)

HUC Purchasers - buyers from HUCs merchants.

MFIs Merchants - existing merchants under Microfinance Institution (MFI) who are able to try online selling.

MFIs Purchasers - buyers from MFIs merchants.

Familiarity - knowledge of the respondents in using the digital devices or online applications.

Comfortability - the ease of using digital devices or online applications for the respondents.

5. METHODOLOGY

5.1. Research Design

The project employed mixed methods (quantitative and qualitative). Survey questionnaires are utilized. Google Forms and interviews using a phone and other online platforms (Zoom, Google Meet, Facebook Messenger) are used.

5.2. Research Respondents

A total of 174 participants who are adults were interviewed specifically, 75 HUCs merchants, HUCs purchasers, 45 MFI merchants, and 10 MFI purchasers.

5.3. Research Area

The project covers the districts of Bicol, Bohol, Cebu North, Cebu South, Leyte, Negros Occidental, Negros Oriental, North Mindanao, Panay North, Panay South, and Samar.

5.4. Instrument

Different questionnaires are administered to different groups of respondents which mainly composed: 1) Profile, 2) Level of familiarity and comfort in Digital Space; willingness to be an MFI merchant, pay for service fees and experience, and digitalization training 3) Preference in an online selling platform 4) Recommendations in establishing an online marketplace platform for MFIs.

5.5. Data Gathering

Potential respondents are initially contacted via phone calls and mobile text messaging. Upon obtaining consent to participate, an interview via phone calls is administered. Data is encoded in Microsoft Excel and the file is imported into statistical software.

5.6. Statistical Analysis

The respondent's profile results are tabulated and analyzed using Statistical Package for the Social Sciences (SPSS) software. Descriptive statistics are employed. Minimum, maximum, mean, and frequency distribution for each of the statements and dimension is computed.

6. RESULTS AND DISCUSSION

6.1. Profile of the respondents

Table 1 shows the details of the geographical profile of the respondents.

Table 1. Geographic location of merchants and purchasers' respondents (HUCs and MFIs) in select Philippine Areas (n=175)

Province	HUC Merchants		MFI Merchants		HUC Purchasers		MFI Purchasers		Overall	
	n	%	n	%	n	%	n	%	n	%
Cebu	14	18.7	45	100	7	18.4	10	100	76	45.2
Iloilo	12	16			5	13.2			17	10.1
Bohol	8	10.7			4	10.5			12	7.1
Negros Oriental	7	9.3			3	7.9			10	6
Bukidnon	5	6.7			4	10.5			9	5.4
Negros Occidental	7	9.3			2	5.3			9	5.4
Leyte	4	5.3			3	7.9			7	4.2
Bicol	6	8			1	2.6			7	4.1
Samar	3	4			2	5.3			5	2.9
Albay	1	1.3			3	7.9			4	2.4
Aklan	2	2.7			2	5.3			4	2.4
Capiz	2	2.7			1	2.6			3	1.8
Misamis Oriental	2	2.7							2	1.2
Dumaguete					1	2.6			1	0.6
Camiguin	1	1.3							1	0.6
Sorsogon	1	1.3							1	0.6
Total	75	100	45	100	38	100			168	100
Type of community										
Urban side	47	62.7	24	53.3	24	63.2	10	100	**105**	**62.5**
Rural side	28	37.3	21	46.7	14	36.8	0	0	**63**	**37.5**
Total	**75**	**100**	**45**	**100**	**38**	**100**	**10**	**100**	**168**	**100**

A total of 168 respondents from merchants and purchasers are interviewed across various regions in the Philippines specifically, Cebu (45.2%), Ilolilo (10.1%), Bohol (7.1%), Negros Oriental (6%), Bukidnon (5.4%), Negros Occidental (5.4%), Leyte (4.2%), Bicol (4.1%), Samar (2.9%), Albay (2.4%), Aklan (2.4%), Capiz (1.8%), Misamis Oriental(1.2%), Dumaguete
(0.6%), Camiguin (0.6%), Sorsogon (0.6%) in which most of them are from urban side (62.5%) while only few are from rural side (37.5%)

Table 1.1 shows the details of the demographic profile of the respondents.

Table 1.1 Demographic and business profile of merchants and purchasers' respondents (HUCs and MFIs) in select Philippine Areas (n=175)

Parameters	HUC Merchant (N=75)	MFIs Merchant (n=45)	HUCs Purchaser (n=45)	MFIs Purchaser (n=10)
Age	39 (Mean)	39 (Mean)	35 (Mean)	39 (Mean)
Ave. Household Size	5 (Mean)	5 (Mean)	5 (Mean)	4 (Mean)
Ave. Monthly Income	Php 20, 846	Php 47, 833	Php 17, 105	Php 60, 741
Ave. Net Disposable Income	Php 8,721.51	Php 27, 588.91	Php 7, 275.68	Php 32, 314.67
Sex	Female (94.7%)	Female (97.8%)	Female (86.8%)	Female (70%)
Civil Status	Married	Married	Married	Married
Educational Attainment	High Scool Level	College Level	College Level	College Level
Source of Income	Employment (45.3%)	Trading/Food Vending (46.7%)	Employment (63.2%)	Employment (80%)
	Trading/Food Vending (37.3%	Employment (37.8%)	Trading/Food Vending (28.9%)	Trading/Food Vending (10%)
	Franchise Travel & Transportation (9.3%)	Rental Business (6.7%)	Franchise, Travel & Transportatio n (5.3%)	Pension (10%)

The respondents have relatively the same demographics across different groups which are female (HUC Merchant, 94.7%; MFI Merchant, 97.8%; HUC Purchasers, 86.8%; MFI Purchasers, 70%), with an average age of 39, household size of five members, college level, with an average monthly income (HUC Merchant, Php 20, 846; MFI Merchant, Php 47, 833; HUC Purchasers, Php 17, 105; MFI Purchasers, Php 60, 741), and with a main source of income such as employment (HUC Merchant, 45.3%; HUC Purchaser, 63.2%; MFI Purchaser, 80%) and trading or food vending (MFI Merchant, 46.7%). However, there is an observed difference between their income wherein MFI Merchants have a higher average monthly income than HUC Merchants and HUC Purchasers. This may be due to differences in the source of income or in the geographical location of MFI merchants in Cebu.

Table 1.1 shows the details of the business profile of the respondents.

Table 1.2 Demographic and business profile of merchants and purchasers' respondents (HUCs and MFIs) in select Philippine Areas (n=175)

Parameters	HUC Merchant (N=75)	MFIs Merchant (n=45)	HUCs Purchaser (n=45)	MFIs Purchaser (n=10)
Business Information				
Gross Monthly Business Income (Mar.2022-May 2022)	Php 15, 336	Php34, 042		
Monthly Average Business Expenses (Mar.2022-May, 2022)	Php8, 493	Php 16, 748		
Type of Business	Trading/Food Vending (86.7%)	Trading/Food Vending (86.7%)		
	Merchandising (5.3%)	Tailoring (6.7%)		
	Others (Agriculture, services, etc.) (8.1%)	Others (Agriculture, manufacturing, etc.) (6.6.%)		
Platform used in an online selling	Facebook, & Messenger	Facebook, & Messenger		
Average years in online selling	2 years (mean)	2 years (mean)		

Top 5 products Sold	1.Food/Snacks 2. Clothing/RTW 3. Beauty Products 4. Household products 5. Footwear	1. Food/Snacks 2. Clothing/RTW 3. Household products 4. Footwear 5. Beauty products		
Frequency of Shopping Online			Seldom (84.2%)	Seldom (80%)
Top 2 Products purchased			Clothing Apparel (63.2%) Footwear (28.9%)	Home Essentials (40%) Jewels/Accessories (30%)

The gross monthly business income generated by MFI Merchants (Php 34, 042) is evidently higher compared to the HUC Merchants (Php 15, 336) with both having the same expenses which are half of their business income (HUC Merchants, Php 8, 493; MFI Merchants, 16, 748). Furthermore, both merchant groups offer the same type of business with most of them exploring trading or food vending (HUC Merchant, 86.7%; MFI Merchant, 86.7%) with top five sold products such as food, clothing, household products, footwear, and beauty products. Conversely, both purchasers' frequency of shopping online is seldom (HUC Purchasers, 84.2%; MFI Purchasers, 80%) in which commonly purchased products are clothing (HUC Purchaser, 63.2%), and home essentials (MFI Purchasers, 40%). It's apparent that, even amid the COVID-19 pandemic, Filipinos continue to acquire clothing apparel, considering it essential but not their foremost priority (Ong et al., 2021).

Table 2 shows the behavioral and psychographic profiles of the respondents.

The majority of all groups agreed (HUC Merchant, 52%; MFI Merchant, 51%; HUC Purchaser, 45%; MFI Purchaser, 80%) that they are likely to read and double-check the reviews and carefully consider the stores' overview, which demonstrated their cautious approach to online product purchases. Filipinos are renowned for their meticulous approach to product purchases, prioritizing factors such as security, swift transactions, convenient payment methods, competitive pricing, ethical values, online reviews and feedback, and affordable shipping rates (Fandialan et al., n.d). Most of them also borrow from their family or friends when out of budget, yet MFI Purchasers avail loans from MFI to sustain inances.

Consequently, respondents' interests revolve around having/doing business. It is evident that they are knowledgeable in using cell phones not only as a past time but also for doing online transactions like shopping and payment (HUC Merchant, 44%; MFI Merchant, 57.78%; HUC Purchaser, 50%; MFI

Purchaser, 50%). Results also found that MFI merchants (42.22%) are more likely to shop online impulsively and enjoy socializing online more than HUC merchants (33.33%). As outlined by Crafts in 2012, technology doesn't initiate impulse buying but rather equips impulsive consumers with enhanced shopping capabilities and expedites transaction procedures, transforming purchases into immediate reactions to impulsive desires.

Table 2. Behavioral and Psychographic profile of merchants and purchasers' respondents (HUCs and MFIs) in select Philippine Areas (n=175)

	HUC's Merchant (n=75)			MFI's Merchant (n=45)			HUCs Purchaser (n=38)			MFI's Purchaser (n=10)		
Behavioral	Disagree (%)	Agree (%)	Strongly Agree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
I read product reviews before buying an item	1	**52**	44		**51**	49		**45**	55		20	**80**
I prefer doing financial transactions online	**49**	39	8	33	**40**	22	39	**45**	7		**80**	20
I am enticed to shop when someone offers to split the shipping fee	**47**	40	6	**44**	42	9	24	**57**	11	10	**70**	20
I am less likely to buy on an online shop which looks outdated	25	**60**	11	22	**62**	9	24	**63**	11	20	**50**	30
I avoid online shops which look messy	24	**59**	13	18	**69**	11	18	**63**	18	10	**60**	30

The opinions of friends/family have an impact on my purchase decision	37	**48**	9	18	**69**	9	37	**53**	8	10	**70**	20
Actions taken when out of budget	1. Borrow from family/friends 2. Use savings 3. Avail loans from MFI			1. Borrow from family/friends 2. Use savings 3. Avail loans from MFI			1. Borrow from family/friends 2. Use savings 3. Avail loans from MFI			1. Avail loans from MFI 2. Use Savings 3. Sell Products		
Psychographic	Disagree (%)	Agree (%)	Strongly Agree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
I'm comfortable doing online financial transactions.	33.33	**44**	18.67	17.18	**57.78**	24.22	34.21	**50**	15.79	10	40	**50**
I am a risk taker.	37.33	**53.33**	8	28.89	40	31.11	47.37	**47.37**	2.63	10	**80**	10
Usually, I do impulse online shopping.	**42.67**	**33.33**	4	**46.67**	**42.22**	8.89	34.21	**50**	10.53	40	40	20
Surfing online is my go-to when bored.	29.33	**54.67**	10.67	17.18	**64.44**	17.78	18.42	**47.37**	34.21	20	**60**	20
I enjoy socializing online more than in person.	**45.33**	32	4	**57.78**	33.33	8.89	**60.53**	28.95	2.63	20	**50**	30
Interests in Life	1.Business 2. Cooking 3. Appliance			1.Business 2. Cooking 3.Recreational Activities			1.Business 2. Cooking 3.Agriculture			1. Personal Development 2.Business 3.Home Care		

6.2. Most used online applications and digital devices of the respondents

Table 3 shows the top three most used applications of the respondents.

Table 3. Top 3 Most Used Applications of merchants and purchasers (HUCs and MFIs) in select Philippines Areas (n=175)

Rank	HUC Merchants			MFI Merchants			HUC Purchasers			MFI Purchasers		
	Apps	n	%	Apps	n	%	Apps	n	%	Apps	n	%
Top 1	Facebook	60	80	Facebook	36	80	Facebook	29	76.3	Facebook	6	60
Top 2	Messenger	49	66.2	Messenger	26	57.8	Messenger	15	41.7	Messenger	5	50
Top 3	YouTube	21	42	Gcash	6	20	Shopee	9	32.1	Shopee	3	30

The first two applications used by the respondents across groups are generally similar such as Facebook (HUC merchants, 80%; MFI merchants, 80%; HUC purchasers, 76.3%; MFI purchasers, 60%) and Messenger (HUC merchants, 66.2%; MFI merchants, 57.8%; HUC purchasers, 76.3%; MFI purchasers, 60%). However, both merchants differ with their third application as HUC merchants indicated YouTube (42%), and MFI merchants as Gcash (20%), while both purchasers agreed to have Shopee (HUC purchasers,32.1%; MFI purchasers, 30%). In the wake of the recent pandemic, there has been a collective recognition of the necessity for digital marketplaces, and Shopee stands out as one of the prominent marketplaces that have risen in prominence over the past few years, becoming a central hub for e-commerce across Asia and beyond (Gan et al., 2022).

Table 3.1 shows the reasons for using the topmost applications of the respondents.

Table 3.1 Reasons for using the topmost applications of merchants and purchasers (HUCs and MFIs) in select Philippines Areas (n=175)

Applications	HUC Merchants		MFI Merchants		HUC Purchasers		MFI Purchasers		Overall	
Top 1-Facebook	n	%	n	%	n	%	n	%	n	%
For business use	27	**45**	16	**44**	1	3.4	0	0	44	**33.59**
Used for entertainment	14	23.3	3	8.3	11	**37.9**	0	0	28	21.37
Used for communication	12	20	2	5.6	11	37.9	0	0	25	19.08
User friendly	3	5	14	39	0	0	6	**100**	23	17.56
Used for getting information updates	4	6.7	1	2.8	5	17.2	0	0	10	7.63
For scouting new ideas	0	0	0	0	1	3.4	0	0	1	0.76
Total	60	100	36	100	29	99.8	6	100	131	100
Top 2- Messenger										
Used for communication	43	**87.8**	10	39	13	**86.7**	2	40	68	**71.58**
User friendly			13	**50**			3	**60**	16	16.84
For business use	6	12.2	3	12					9	9.47
For entertainment					2	13.3			2	2.11
Total	49	100	26	100	15	100	5	100	95	100
Top 3-Shoppee										
Used for purchasing products					8	**88.9**	1	33.3	9	75
Used for searching offered products/promotions & sale					1	11.1	2	**66.7**	3	25
Total					9	100	3	100	12	100
Top 3- Youtube										
Used for entertainment	18	**85.71**							18	85.71
Used for scouting new ideas	3	14.26							3	14.26
Total	21	100							21	100
Top 3-Gcash										
Used for online financial transactions			6	100					6	100
Total			6	100					6	100

In terms of their reasons for using Facebook, both merchants appeared to have higher rates for business use (HUC merchants, 45%; MFI merchants, 44%) while purchasers are using it for entertainment (HUC purchasers, 37.9%), and because it is user-friendly (MFI purchasers, 100%). Consequently, numerous entrepreneurial start-ups are harnessing the power of social media platforms to launch their businesses, drawn to their user-friendly interfaces and expansive connectivity capabilities (Caterdrilla, 2017).

Meanwhile, they all agreed to use Messenger for communication (Overall, 71.58%). For using Shopee, both purchasers agreed to use it for purchasing products (HUC purchasers, 88.9%; MFI purchasers 33.3%).

This signifies that both merchants already utilized Facebook to sell their products. Although purchasers mostly use Facebook for entertainment and communication, merchants selling their products on Facebook is still advantageous as this is the most used app by purchasers. With the increasing number of Filipinos embracing online shopping, Facebook emerges as the optimal platform for bolstering social commerce, serving as a potent strategic driver for capturing the burgeoning online shopper market (Caterdrilla, 2017).

Table 3.2 shows the most used applications and devices of the respondents.

Table 3.2 Usage of digital devices and applications of merchants and purchasers (HUCs and MFIs) in select Philippines Areas (n=175)

Dimension	HUC Merchants		MFIs Merchants		HUC Purchasers		MFIs Purchasers		Overall	
Digital Devices										
	n	%	n	%	n	%	n	%	n	%
Desktop	10	13.33	8	17.78	6	15.79	3	30	27	16.07
Laptop	32	42.57	30	66.67	21	55.26	9	90	92	54.76
Smartphone	75	**100**	45	**100**	38	**100**	10	**100**	168	**100**
Tablet	1	1.33	9	20	2	5.26	3	30	15	8.93
DSLR	12	16	13	28.89	12	31.58	8	80	45	26.79
Digital Camera	9	12	6	13.33	4	10.53	1	10	20	11.9
Polaroid			1	2.22	1	2.63	2	20	4	2.38
Action Camera							2	20	2	1.19
Usage of social media										
Messenger	75	**100**	45	**100**	38	**100**	10	**100**	168	**100**
Whatsapp	2	2.67	1	2.22			4	40	7	4.17
Viber							5	50	5	2.98
Facebook groups/pages	67	89.33	45	100	36	94.74	10	100	158	94.05
Instagram			1	2.22	3	7.8	4	40	8	4.76
Usage of media and streaming platforms across groups										
Youtube	56	**74.67**	38	**84.44**	29	**76.32**	10	**100**	133	**79.17**
Netflix	4	5.33	6	13.33	2	5.26	6	60	18	10.71
Spotify			1	2.22	1	2.63	4	40	6	3.57
Tiktok	1	1.33	1	2.22	5	13.16			7	4.17

Usage of email-services acrossgroups										
Gmail	39	52	38	84.44	22	57.89	9	90	108	**64.29**
Yahoomail	5	6.67			5	13.16	1	10	11	6.55
Google Drive	23	30.67	24	53.33	13	34.21	10	100	70	41.67
Usage of online shopping app across groups										
Shopee	48	64	38	84.44	31	81.58	10	100	127	**75.6**
Lazada	18	24	20	44.44	9	23.68	7	70	54	32.14
Zalora			2	4.44			1	10	3	1.79
Shein	4	5.33	1	2.22	1	2.63	1	10	7	4.17
Usage of e-payment/banking apps across groups										
Gcash	54	72	41	91.11	29	76.32	9	90	133	**79.17**
Paymaya	2	2.67	5	11.11			2	20	9	5.36
BPI			4	8.89			2	20	6	3.57
BDO			6	13.33					6	3.57
UBP			1	2.22			4	40	5	2.98
Palawan Pay	1	1.33							1	0.6
Usage of courier/logistic apps across groups										
JNT	8	10.67	2	4.44					10	5.95
Foodpanda	3	4	4	8.89	13	34.21	5	50	25	14.88
Maxim	9	12	24	53.33	1	2.63	6	60	40	**23.81**
Grab	1	1.33	4	8.89	1	2.63	7	70	9	5.36
JRS			1	2.22					1	0.6
Angkas			1	2.22					1	0.6
Lalamove			5	11.11			2	20	7	4.17
Google Maps	22	29.33	31	68.89	20	52.63	5	50	78	**46.43**
Waze			5	11.11			7	70	12	7.14

The result shows that across groups, the majority of them utilized smartphone devices (100%), Messenger (100%) among other social media, YouTube (79.17%) for media and streaming, Gmail (64.29%) for email services, Shopee (75.6%) for online shopping, G2cash (79.17%) for e-payment, Maxim (23.81%) for courier or logistics, and google maps (46.43%) for directions. There is a growing enthusiasm for leveraging mobile phones in the realms of commerce and development (Alampay, 2008). Additionally, it is observed that mobile technology offers SMEs significant advantages, affording them cost-efficient operations and increased flexibility in communicating with suppliers and customers. However, it is also noted that this technology has limitations, particularly when it comes to tracking inventory and its effectiveness in supporting marketing campaigns (Esselaar et al., 2007).

6.3. Level and factors affecting familiarity and comfortability in using digital devices and online applications of the respondents.

Table 4 shows the level of familiarity and comfortability in using the digital devices and online applications of the respondents.

Table 4. Level of familiarity and comfortability in using digital devices and online applications of merchants and purchasers (HUCs and MFIs) in select Philippines Areas (n=175)

Parameters		HUC Merchants		MFI Merchants		HUC Purchasers		MFI Purchasers		Overall	
		F (Mean)	C (Mean)	F (Mean)	C (Mean)	F (Mean)	C (Mean)	F (Mean)	C (Mean)	F (Mean)	C (Mean)
Gadgets or Digital Devices	Desktop	2.2	2	1.8	1.7	1.9	1.9	2.1	2	2	1.9
	Laptop	2.2	2	3.5	3.5	3.2	3.3	3.4	3.3	**3.08**	**3.03**
	Smartphone	3.7	3.7	3.6	3.7	3.8	3.7	3.6	3.7	**3.68**	**3.7**
	Tablet	1.5	1.4	1.9	1.9	1.2	1.3	1.7	1.9	1.58	1.63
	DSLR	1.8	1.8	2.1	2	2.3	1.9	3	2.9	2.30	2.15
	Digital Camera	1.8	1.6	1.5	1.7	1.7	1.7	1.5	1.3	1.63	1.58
	Polaroid	0	0	1.1	1.3	1.4	1.5	1.4	1.4	0.98	1.05
	Action Camera	0	0	0	0	0	0	1.1	1.2	0.28	0.30
Online messaging Apps	Messenger	4	4	3.8	3.8	3.7	3.7	3.9	3.8	**3.85**	**3.83**
	Whatsapp	2.3	1.9	1.2	1.2	0	0	1.6	1.4	1.275	1.125
	Viber	0	0	0	0	0	0	1.7	1.8	0.425	0.45
Media and Streaming	Facebook group/pages	3.8	3.9	3.6	3.7	3.8	3.8	3.6	3.7	**3.7**	**3.78**
	Instagram	0	0	1.4	1.3	1.3	1.4	1.5	1.4	1.05	1.025
	Youtube	3.7	3.6	3.5	3.4	3.5	3.6	3.8	3.6	**3.63**	**3.55**
	Netflix	1.3	1.2	1.3	1.4	1.6	1.5	3.5	3.6	1.93	1.93
	Spotify	0	0	1.1	1.1	1.2	1.3	2.1	1.8	1.1	1.05
	Tiktok	1.4	1.6	1.7	1.6	1.8	1.7	1.9	2	1.7	1.73
Email Services	Gmail	2.2	1.9	3.7	3.6	3.7	3.8	3.6	3.7	**3.3**	**3.25**
	Yahoomail	1.6	1.5	0	0	1.6	1.5	1.2	1.1	1.10	1.03
	Google Drive	2.1	1.8	2.2	2.4	1.9	2	3.9	3.8	2.53	2.50
Online Shopping Apps	Shoppe	3.7	3.5	3.8	3.8	3.5	3.6	3.7	3.7	**3.68**	**3.65**
	Lazada	2.2	2.1	2.3	2.2	2.1	2.3	3.6	3.5	2.55	2.53
	Zalora	0	0	1.3	1.5	0	0	1.3	1.4	0.65	0.73
	Shein	1.7	1.4	1.4	1.3	1.2	1.4	1.3	1.2	1.4	1.33
E-payment or Banking Apps	Gcash	3.7	3.8	3.9	4	3.6	3.6	3.8	3.9	**3.75**	**3.83**
	Paymaya	1.3	1.4	1.5	1.4	0	0	1.3	1.3	1.03	1.03
	BPI	0	0	1.3	1.4	0	0	1.3	1.5	0.65	0.73
	BDO	0	0	1.4	1.3	0	0	0	0	0.35	0.33
Courier/Logistics	JNT	1.5	1.3	1.2	1.1	0	0	0	0	0.68	0.6
	Foodpanda	1.1	1.2	1.3	1.3	2.2	2.3	3.3	2.5	1.98	1.825
	Maxim	1.3	1.5	2.2	1.9	1.5	1.4	3.4	3.6	2.1	2.1
	Grab	1.1	1.3	1.5	1.4	1.3	1.4	3.7	3.7	1.9	1.95
	JRS	0	0	1.3	1.3	0	0	0	0	0.33	0.33
	Angkas	0	0	1.7	1.6	0	0	0	0	0.43	0.4
	Lalamove	0	0	1.5	1.7	0	0	1.3	1.5	0.7	0.8
Navigation	Google Maps	1.8	1.6	3.8	3.7	2.2	2.1	3.6	3.7	2.85	2.78
	Waze	0	0	1.5	1.7	0	0	3.5	3.7	1.25	1.35

Legend:
F-Familiarity
C-Comfortability
Not familiar/comfortable-1.00-1.49
Very familiar/comfortable-2.50-4.00

The results clearly demonstrate a high level of familiarity and comfort among respondents from both

groups when it comes to using smartphones (F:3.08; C: 3.03) and laptops (F: 3.68; C: 3.7). The same thing with Messenger (F: 3.85; C 3.83) for messaging apps, Facebook (F: 3.7; C: 3.78), and YouTube (F: 3.63; C: 3.55) for media and streaming, Gmail (F: 3.3; C: 3.25) for e-mail services, Shopee (F: 3.68; C: 3.65) for online shopping, and Gcash (F: 3.75; C: 3.83) for e-payment. This aligns with their earlier responses, as discussed, where their most frequently used digital devices and online applications also happened to be the ones, they are most familiar with and comfortable using.

Table 5 shows the factors affecting familiarity and comfortability in using the digital devices and online applications of the respondents.

Table 5. Factors affecting familiarity and comfortability in online platforms of merchants and purchasers (HUCs and MFIs) in select Philippines Areas (n=175)

Factors	HUC Merchants		MFI Merchants		HUC Purchasers		MFI Purchasers		Overall	
	n	%	n	%	n	%	n	%	n	%
User-friendly	12	16	17	37.8	9	23.7	2	20	40	**23.81**
Frequency of use	12	16	12	26.7	2	5.3	1	10	27	**16.07**
User interface	14	18.7	2	4.4	6	15.8	4	40	26	**15.48**
Usefulness of the app	11	14.7	6	13.3	7	18.4			24	14.29
Internet connection	4	5.3	5	11.1	2	5.3	1	10	12	7.14
Legitimacy	3	4			4	10.5			7	4.17
Interesting			3	6.7			1	10	4	2.38
App reviews					2	5.3	1	10	3	1.79
Often advertised	3	4							3	1.79
None	16	21.3			6	15.8			22	13.1
Total	75	100	45	100	38	100	10	100	168	100

The common factor that mainly affects their familiarity and comfortability in using the various platforms is, if the application is user-friendly (23.81%), frequency of use (16.07%), and has a good user interface (15.48%). Although previous results show low familiarity and comfortability of respondents towards numerous applications or platforms, they are interested in learning new platforms ($\overline{X}$:3.41).

Table 5.1 Interest to learn about new online platforms of merchants and purchasers (HUCs and MFIs) in select Philippines Areas (n=175)

Group	Mean	Overall
HUC Merchants	3.27	3.41
MFI Merchants	3.28	
HUC Purchasers	3.29	
MFI Purchasers	3.8	

1-1.49= Not interested at all, 1.5-2.49= Not so interested, 2.5-3.49= Interested, 3.5-4= Very interested

6.4. Perception and experienced benefits of using digital space for the respondents.

Table 6 shows the perceived benefits of the respondents in using the digital space.

Table 6. Perceived benefits of using digital space for merchants and purchasers (HUCs and MFIs) in select Philippines Areas (n=175)

Statement	HUC Merchants Mean	MFI Merchants Mean	Statement	HUC Purchasers Mean	MFI Purchasers Mean
Selling online helps me earn more in addition to the physical selling.	3.28	3.58	The ease of navigation on an online shop is very important to me	3.32	3.6
Online selling is more convenient because I have time to accommodate all orders.	3.13	3.42	Online shopping is more convenient because I take my time to compare products	3.11	3.3
My physical shop gained additional customers upon doing online presence	3.09	3.4	Online shopping is more comfortable because I can shop products whenever I want.	3.16	3.2
Grateful for the ease of displaying products on an online shop rather than displaying it on a physical store.	3.12	3.27	It is more convenient to shop online without having to shop outside.	2.92	3.4
Online selling is more comfortable because I can sell products whenever I want.	2.99	3.33	Shopping online is cheaper compared to retail shopping.	3.05	2.8
It is more convenient to sell online without having to sell outside.	2.92	3.31			

1-1.49= Strongly Disagree, 1.50-2.49-Disagree, 2.50-3.49=Agree, 3.5-4=Strongly Agree

The results indicated that both groups of merchants strongly agreed that selling online helps them earn more on top of their physical store (HUC merchants, 3.28; MFI merchants, 3.58) and that it is more convenient as they could accommodate all orders (HUC merchants, 3.13; MFI merchants, 3.42). They strongly believe that online selling helps them gain additional customers (HUC merchants, 3.09; MFI merchants, 3.4), and can sell products whenever they want (HUC merchants, 2.99; MFI merchants, 3.33), but not to the extent of relying on to online selling only without having to sell outside or physically (HUC merchants, 2.92; MFI merchants, 3.31). Given the profound changes taking place and the significant role that internet businesses play in supplementing people's income, establishing an online business has become imperative in our current pandemic-stricken environment. This avenue allows individuals to generate income by conducting sales online, all from the comfort of their own homes (Tabuena et al., 2022).

This aligns as well with the perceptions of the purchasers where they expressed that ease of navigation is important when purchasing online products (HUC purchasers, 3.32; MFI purchasers, 3.6), which allows them to shop whenever they want (HUC purchasers, 3.16; MFI purchasers, 3.2), hence making them believe that shopping online is more convenient (HUC purchasers, 2.92; MFI purchasers, 3.4). The rise of the Internet has expanded consumers' capability to shop from anywhere and at any time. It allows them to easily compare product features, values, and prices before deciding on in-store purchases

(Athapaththu et al., 2018).

Table 6 .1 shows the experienced benefits of the respondents in using the digital space.

Table 6.1. Benefits experienced upon using online platforms of merchants and purchasers (HUCs and MFIs) in select Philippines Areas (n=175)

Benefits	HUC Merchant		TNN Merchants		HUC Purchasers		TNN Purchasers		Overall	
	n	%	n	%	n	%	n	%	n	%
Convenience and hassle free	17	22.7	14	31.1	16	42.1	7	70	54	**32.14**
Ease in selling products	12	16	10	22.2	0	0	0	0	22	**13.1**
Saves time, money, and effort	11	14.7	0	0	10	26.3	1	10	22	**13.1**
Gain of additional income	11	14.7	4	8.9	0	0	0	0	15	8.93
Increase of customers	7	9.3	8	17.8	0	0	0	0	15	8.93
Easier communication with buyers	3	4	5	11.1	0	0	0	0	8	4.76
Cheaper prices/discounts	0	0	0	0	7	18.4	0	0	7	4.17
Fast and transcation	7	9.3	0	0	0	0	0	0	7	4.17
Expand of market	4	5.3	1	2.2	0	0	0	0	5	2.98
Ease in finding buyers	1	1.3	3	6.7	0	0	0	0	4	2.38
More time to review products	0	0	0	0	2	5.3	1	10	3	1.79
Offers a wide range of products	0	0	0	0	3	7.9	0	0	3	1.79
None	2	2.7	0	0	0	0	1	10	3	1.79
Total	75	100	45	100	38	100	10	100	168	100

In contrast to the anticipated benefits associated with utilizing digital space, the prevailing sentiment among respondents from all groups highlights convenience and a hassle free experience (32.14%) as the primary benefits of engaging with digital space. Nevertheless, few merchants have conveyed that it has streamlined the process of selling their products (13.1%) whereas few buyers have effectively conserved their time, finances, and energy (13.1%).

Table 6 .2 shows the fears or challenges when selling/buying online for the respondents.

Table 6.2 Top fears or challenges when selling/buying online for merchants and purchasers (HUCs and MFIs) in select Philippines Areas (n=175)

Fears	HUCs Merchants		TNN Merchants		Fears	HUCs Purchasers		TNN Purchasers	
	n	%	n	%		n	%	n	%
Scams	50	66.7	24	37.5	Scams	24	63.2	8	80
Bogus buyers	38	50.7	20	32.5	Delivered wrong items/not the same with what is posted	20	52.6	6	60
Cancellation of orders	22	29.3	15	30	Damaged items	15	39.5	5	50

Among the fears or challenges cited by across groups when engaged in buying and selling, scams (HUC

merchants, 66.7%; MFI merchants, 37.5%; HUC purchasers, 63.2%; MFI Purchasers, 80%) stand out as the predominant and frequently expressed concern. However, both groups differ in their following concerns as merchants expressed bogus buyers (HUC merchants, 50.7%; MFI merchants, 32.5%), and cancellation of orders (HUC merchants, 29.3%; MFI merchants, 30%) as their other fears or challenges when selling the products.

On the purchaser's side, the sentiment shared is that receiving incorrect items, or items that do not match their online descriptions (HUC purchasers, 52.6%; MFI purchasers, 60%), as well as encountering damaged items upon delivery (HUC purchasers, 39.5 %; MFI purchasers, 50%) stand out as additional sources of concern and challenges when engaging in online purchases. As online customer numbers increase, so does the risk of unscrupulous individuals taking advantage of the situation. Reports have shown that many Filipinos have fallen victim to fraudulent sellers and scammers who swindle their money without delivering the promised products. In certain instances, incorrect orders may be received, leaving customers with limited or no recourse for order rectifications and returns. It's worth noting that these fraudulent incidents have occurred even on some of the most reputable online platforms (Atienza et al., 2021).

6.5. Respondents' willingness to pay and attend digitalization training.

Table 7 shows the level of willingness and amount willing to pay for in-app services of the respondents.

An overwhelming majority of participants exhibited a strong willingness (89.3%, $\bar{X}$ 3.05) to invest in-app services, further affirming their earlier responses. This inclination underscores their recognition that such services would not only enhance their selling capabilities but also offer a seamless avenue for convenient purchases. Additionally, all groups agree when it came to the preferred payment range of the in-app services, indicating a willingness to pay between Php 51 to Php 100 (38%) on a monthly basis (39%), and are open to a delivery fee within Php 51 to Php 100 range.

Table 7. Willingness to pay for in-app service fees in selling/shopping online of merchants and purchasers (HUCs and MFIs) in select Philippines Areas (n=175)

	HUC Merchants		MFI Merchants		HUC Purchasers		MFI Purchasers		Overall	
	n	%	n	%	n	%	n	%	n	%
No. of respondents willing to pay	67	89.3	42	93.3	34	89.5	7	70	**150**	**89.3**
Level of willingness	3.12		3.31		3.05		2.7		**3.05**	
	1-2.49- Not willing *2.5-4- Very willing*									
Price range willing to pay for in-app/site service fees										
Php 1- Php 50	13	17.3	10	22.2	9	23.7	4	40	36	24
Php 51- Php 100	28	37.3	13	28.9	14	36.8	2	20	**57**	**38**
Php 101- Php 150	13	17.3	10	22.2	7	18.4	1	10	31	20.7
Php 151-Php 200	6	8	2	4.4	1	2.6			9	6
Php 201- Php 250	4	5.3	3	6.7	1	2.6			9	6
Php 251 and above	3	4	4	8.9	2	5.3			8	5.3
Frequency of payment										
Monthly	45	60	32	71.1	17	44.7	5	50	**99**	**66**
One-time	12	16	7	15.6	13	34.2	1	10	33	22
Yearly	7	9.3	2	4.4	4	10.5	1	10	14	2.7
Weekly	3	4	1	2.2					4	9.3
Price range willing to pay for a delivery fee										
Php 1- Php 50					10	26.3	5	50	15	36.6
Php 51- Php 100					14	36.8	2	20	16	**39**
Php 101- Php 150					8	21.1			8	19.6
Php 151-Php 200					1	2.6			1	2.4
Php 201- Php 250					1	2.6			1	2.4
Php 251 and above										

Table 7.1 shows the level of willingness to join training in relation to digitalization of the respondents.

Table 7.1 Willingness to join training in relation to a digitalization of merchants and purchasers (HUCs and MFIs) in select Philippines Areas (n=175)

	HUC Merchants			MFI Merchants			Overall
	Min	Max	Mean	Min	Max	Mean	Mean
Level of Willingness			3.31			3.62	**3.5**
Amount willing to pay	25.5	500	129.74	30	2,750	301.82	**215.78**
1-1.49=Very Unwilling, 1.5-2.49=Not Willing, 2.5-3.49=Willing, 3.5-4=Very Willing							
Reasons of Willingness	**HUC Merchants**		**MFI Merchants**		**Overall**		
	n	**%**	**n**	**%**	**n**	**%**	
To acquire additional knowledge about digitization	53	7.7	14	31.1	67	**55.8**	
For the growth of the business	12	16	12	26.7	24	20	
To learn new techniques or strategies in managing online selling	1	1.3	18	40	19	15.8	
To improve my business skills	4	5.3			4	3.3	
In order to learn how to navigate online platforms	4	5.3			4	3.3	
Interested to learn	1	1.3			2	1.7	

The average score across all groups indicated a high level of desire to participate in digitalization-related training ($\bar{X}$: 3.5), with an average paying cost of Php 215.78. While their enthusiasm for digitalization is evident, it is important to note that their financial commitment to the training may be limited due to other ongoing expenses. Relatively, the primary motivation among respondents for participating in the mentioned training stems largely from the aspiration to gain further insights into digitalization (55.8%). Following closely is the eagerness to acquire novel techniques or strategies for effective online selling management (20%). This clearly indicates that even buyers are enthusiastic about acquiring these skills, possibly with the intention of exploring their own entrepreneurial pursuits.

Table 8 shows the techniques or marketing strategies used in online selling for merchants.

Table 8. Techniques or marketing strategies used in online selling for merchants (HUCs and MFIs) in select Philippines Areas (n=175)

Marketing Strategies	HUC Merchants		MFI Merchants		Overall	
	n	%	n	%	n	%
Frequent posting of products	37	54.4	24	53.3	61	**50.8**
Posting teasers	13	19.1	15	33.3	28	**23.3**
Live selling	11	16.2	6	13.3	17	14.2
Discount/Promos	13	19.1	1	2.2	14	11.7
Sales talk	7	10.3			7	5.8
Use of creative and attractive advertisement	6	8.8			6	5
Posting of customer feedbacks			3	6.7	3	2.5
Giving off freebies	2	2.9			2	1.7
Bidding					1	0.8
Bundle package					1	0.8

As shown in the table, most of the applied marketing strategies by both merchants revolve around frequent posting of products (50.8%) and posting teasers (23.3%). Only a few of them are able to practice live selling (14.2%), discount/promos (11.7%), sales talk (5.8%), and posting customer feedback (2.5%).This underscores the evident requirement for merchants, both from HUCs and MFIs, to undergo pertinent training that would facilitate their transition to digital business practices. Microfinance institutions can play a crucial role in empowering these merchants, thereby opening up opportunities from multiple standpoints.

6.6. Importance and preferred features in an online shop of the respondents

Table 9 shows the importance of the features in an online shop for respondents.

Table 9. Importance of the features in an online shop for purchasers and merchants (HUCs and MFIs) in select Philippines Areas (n=175)

Features	HUC Purchasers Mean	MFI Purchasers Mean	Overall Mean
Many shipment options is available	3.42	3.5	3.46
Organized product categories	3.68	3.7	3.69
Sorting options when browsing is present	3.55	3.7	3.63
Meticulous and realistic product description (size, color, shape, etc.)	3.66	3.9	3.78
Reviews of other shoppers are showcased	3.71	3.7	3.71
Prompt customer services of the seller	3.76	3.7	3.73
Vouchers and discounts entice me to shop that seller	3.76	3.8	3.78
Features	**HUC Merchants Mean**	**MFI Merchants Mean**	**Overall Mean**
Order & Shipping Management			
An organized orders section showing its progress (cancellation, return/refund, etc.)	3.53	3.69	3.61
A section where a list of shipment options is available	3.49	3.73	3.61
An available tracker for all shipped-out orders	3.63	3.91	3.77
		Sub-average	**3.66**
Content and Data Management			
User-friendly when posting products	3.61	3.76	3.69
Available data selection where business insights and account development resorts are produced and accessible to track sales progress	3.51	3.78	3.65
Customizing the shop is not that complex	3.48	3.62	3.55
		Sub-average	**3.63**
Financial Management			
A finance section where I can access and see the income, expense, and balances	3.56	3.82	3.69
A finance section where I can see and choose payment options available	3.53	3.82	3.68
Returns and refunds section where I can dispute, compensate, and accept such circumstance	3.48	3.64	3.56
		Sub-average	**3.64**
Marketing Management			
A marketing center section that helps attract customers	3.61	3.8	3.71

Provision of an advertisement section where I can possibly endorse products in a broader spectrum	3.47	3.8	3.64
Promotion and reward programs initiated by the organization/company	3.52	3.62	3.57
		Sub-average	**3.64**
Customer Service			
Prompt customer service	3.52	3.76	3.64
Communication with customers is easy and available	3.55	3.82	3.69
FAQs, guidelines, and policies are readily available	3.48	3.71	3.60
		Sub-average	**3.64**

1-1.49=Very Unimportant, 1.5-2.49= Unimportant, 2.5-3.49=Important, 3.5-4= Very Important

The collective feedback from purchasers emphasized the high importance of the indicated features, with a particular focus on realistic product descriptions including aspects like size, shape, and more ($\bar{X}$:3.46). As mentioned in the above discussion, this aspect emerged as a prominent concern for them when navigating online product purchases.

Moreover, the inclusion of certain features such as organized product categories (($\bar{X}$:3.69), sorting options (($\bar{X}$: 3.63), reviews of other shoppers ($\bar{X}$:3.71), prompt customer services of the seller ($\bar{X}$:3.73), and vouchers or discounts ($\bar{X}$:3.78), also emerges as highly significant. These elements play a substantial role in capturing the interest of purchasers and enhancing their online shopping experience. The significance of post-purchase activities, including customer service, the post-affective state reflected in customer satisfaction, and affective behavior is acknowledged (Santos and Boote, 2003).

Similarly, merchants expressed the same thoughts as most of the features indicated appear to be very important for them when selling the product online, especially with order and shipping management ($\bar{X}$:3.66). This corresponds with prior research that has highlighted the accurate delivery of products to customers' homes and the proficient management of returns are two factors that have been noted to influence the satisfaction of online shoppers (Hsu, 2008). On top of that, features related to content and data management ($\bar{X}$:3.63), financial management ($\bar{X}$: 3.64), marketing management ($\bar{X}$:3.64), and customer service ($\bar{X}$:3.64) are considered to be very important as well for the merchants.

Table 9.1 shows the preference features in an online shop for respondents.

Table 9.1. Features would like to have in an online shopping app/site of purchasers (HUCs and MFIs) in select Philippines Areas (n=175)

Features	HUC Purchasers		MFI Purchasers		Overall	
	n	%	n	%	n	%
Presence of vouchers/discounts and free shiping	14	36.8	1	10	15	**31.3**
Variety of products are available	6	15.8			6	**12.5**
Realistic product image and description	4	10.5	1	10	5	**10.4**
User friendly	2	5.3	3	30	5	**10.4**
Certified sellers for good quality products	2	5.3	1	10	3	6.3
With many available mode of payment	2	5.3	1	10	3	6.3
Good customer service	2	5.3			2	4.2
Presence of realistic feedback and reviews	1	2.6	1	10	2	4.2
With sorting options	1	2.6	1	10	2	4.2
None	2	5.3			2	4.2
Tracker of orders	1	2.6			1	2.1
Can connect with Facebook to access merchants' identity	1	2.6			1	2.1
Organized product list			1	10	1	2.1

The features most favored by respondents across all groups on an online application or website included the availability of vouchers/discounts and free shipping (31.3%), a wide selection of products (12.5%), accurate product images and descriptions (10.4%), and user friendliness (10.4%). Over the past few years, free shipping has evolved into a substantial motivator influencing purchasing decisions. Online brands that consistently offer free shipping tend to gain recognition and cultivate a devoted and dedicated customer base (Yasay, 2015). Consequently, consumers' perceptions of web advertisement characteristics play a pivotal role in shaping their intentions to make purchases on online shopping platforms (Kim, 2010). Therefore, when designing an online shopping application or website, it is essential to prioritize the mentioned features.

6.7. Recommendations for existing MFI merchants of possible establishment of an online marketplace platform.

The contribution of MSMEs to the economy is undeniable, and their journey towards digitalization is vital for their sustained growth. Microfinance institutions can play a crucial role in this transformation by offering training, financial support, and guidance, ultimately fostering economic development and prosperity. Hence, MFIs can consider the following recommendations to enhance their support for clients (both purchasers and merchants) in the process of digitalization:

1. **Conduct seminars/training related to digital marketing, use of digital devices, consumer protection, and e-banking.** This ensures that MFI merchants can effectively promote their products or services online, leveraging various digital

channels and strategies. At the same time, it teaches MFI purchasers to become highly aware of consumer rights and protection in the digital realm, emphasizing safe online practices and recognizing potential scams or fraud.

2. **Maximize Facebook and Messenger as an online marketplace.** Establishing Facebook groups, pages, or initiatives for buying and selling facilitates swift and convenient communication between merchants and buyers, especially given that this is their most frequently used platform.
3. **Promote relative safety of purchasers.** Highlighting the merchant demographics and their affiliation with your reputable institution not only underscores their legitimacy but also fosters a strong sense of trust among purchasers.
4. **Establish more partnerships with existing logistics companies.** To maximize profit and to promote efficiency especially when shipping both non-perishable and perishable items.
5. **Promote clients' businesses compliance with essential permits and registrations, such as DTI registration.** Not only is this a prerequisite for established food delivery apps like FoodPanda and GrabFood, but it also reinforces business legitimacy, thereby instilling a higher level of trust in purchasers and preventing potential scams.
6. **Explore existing and established online platforms instead of developing and moving to a new one.** It is advisable to consider well-established applications such as Facebook, FoodPanda, GrabFood, Shopee, and Lazada, rather than developing a new one that would necessitate extensive promotion to gain user awareness and require user education on navigation.

7. CONCLUSION AND RECOMMENDATION

7.1. Conclusion

This study offers a detailed overview of online buying and selling practices among Filipino merchants and consumers, focusing on microfinance products, revealing that respondents are primarily urban, college-educated women averaging 39 years old, with notable income disparities between MF and HUC merchants earn more, despite similar expenses and business types. Online purchasers shop infrequently, favoring clothing and home essentials, while Facebook, Messenger, and Shopee are key platforms used, with high comfort levels in smartphones and apps. Despite recognizing the benefits of online transactions such as convenience and broader reach, users face issues like scams and transaction difficulties, and are willing to invest modestly in digital services and training. Desired platform features include vouchers, discounts, free shipping, and detailed services and detailed product information, with prevalent challenges needing resolution to improve user satisfaction.

7.2. Recommendation

1. Product Development:

- **Integration with Popular Apps**: Develop or enhance the platform to integrate seamlessly with Facebook, Messenger, and Shopee These are widely used and trusted by respondents, making them ideal for marketing and customer engagement.
- **Feature Prioritization:** Incorporate feature that align with user preferences such as

vouchers, discounts, free shipping, and detailed product descriptions. Ensure that the platform is user-friendly and provides accurate product information to build trust and encourage frequent use.

- **Security Measures:** Implement robust security protocols to address concerns about scams and fraudulent activities. This includes secure payment gateways and verification processes to protect users.

2. Training and Support:

- **Affordable Training Programs:** Offer training programs on digital marketing and e-commerce best practices within the price range respondents are willing to pay (around Php 215.78). Focus on practical skills that can help users enhance their online presence and improve their selling strategies.
- **Ongoing support:** Provide continuous support and resources to help users enhance adapt to digital tools and address any challenged they could face. This could include customer service support and troubleshooting guides.

3. Marketing Strategies:

- **Engagement through Social Media:** Create engaging content, promotions, and advertisements to attract potential customers and drive sales.
- **Utilize E-Commerce Platform:** Enhance presence on e-commerce platforms like Shopee to reach a broader audience. This includes optimizing products listings and participating in platform-specific promotions.

4. Addressing Challenges:

- **Improve Transaction Processes:** Streamline the buying and selling processes to minimize hassles and improve overall user experience. Consider features such as real-time tracking, easy return policies, and efficient customer service.
- **Transparency and Accuracy:** Ensure that product descriptions and images are accurate and comprehensive. This will help mitigate issues related to order inaccuracies and build customer trust.

It is essential to acknowledge that responses from surveys may not always reflect future behaviors accurately. Users' preferences and willingness to engage with new platforms or services can change due to various factors, including evolving market conditions and personal circumstances. Therefore, while these recommendations are based on current data, continuous user feedback and adaptability will be crucial for the successful implementation and refinement of any digital platform.

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Uncovering the Cybersecurity Needs and Opportunities Across Selected Industries in the Philippines

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ABSTRACT

The aftermath of the COVID-19 pandemic brought many technological changes for all business types and sizes. Customer and financial transactions using e-wallets, mobile apps, and other cloud products skyrocketed to accommodate consumers while maintaining social distancing and enforcing no contact. With the rise of technology use for businesses, cybersecurity attacks such as phishing, scams, and ransomware spiked, affecting consumers and the enterprise. The study explores the current cybersecurity posture of the selected industries in the Philippines, specifically the attack surface and its road for protection. A survey was conducted to determine if business owners and employees know the cybersecurity threats in their respective organizations and what actions they should take. Various cybersecurity attacks were also analyzed and correlated to the type of business being evaluated to determine if there are attack patterns. The study also provides a detailed view of the common ways of securing businesses from common cyber threats and attacks by engaging security services such as cybersecurity maturity assessment, data privacy compliance, security audit, security testing, and risk analysis. Different cybersecurity service providers were also discussed, showcasing their strengths aimed at fortifying the organization's security posture. Lastly, a framework is provided to ensure that all IT systems used are adequately checked, monitored, and protected using cost-effective and comprehensive measures to help improve its cybersecurity posture. The future state of secured industries in the Philippines is also discussed, with recommendations for achieving it within the next three to five years.

Keywords: Cybersecurity; Security Posture; Enterprise Protection

1. INTRODUCTION

Cybersecurity attacks have been consistently plaguing the Philippines, targeting various industries. In 2023, government agencies such as Philhealth, the Department of Science and Technology (DOST), and the Philippine Statistics Authority (PSA) succumbed to massive data breaches. (GMA Integrated News, 2023) The impact of the breaches may be overwhelming since many Filipino members' personal information in the database was exposed. Issues like expired anti-virus subscriptions, lack of compliance checks, and security testing were the identified reasons for the incidents.

Private organizations were not spared. Availability issues in online banking and e-commerce apps such as BPI and GCash have recurred multiple times, halting daily transactions both for businesses and consumers. The same bank, BPI, encountered functional glitches that deducted and added money in several of their customer accounts, prompting an integrity issue in the banking system. (Bilyonaro, 2023)

Prominent universities like De La Salle University also experienced a significant security incident late this year. They responded quickly, locking down their systems, reimaging affected machines, restricting access to their infrastructure, mandatory changing the passwords, and reporting to the authorities. (ABS-CBN News, 2023)

As cyberattacks do not discriminate the type and size of the organization, businesses need to have a clear cybersecurity strategy to ensure that they are adequately equipped with the right tools and processes to respond to these threats.

Responses of organizations vary depending on their level of maturity. While the budget allocated for cybersecurity is a factor, it is not automatic that bigger budgets mean more extensive security. In the case of the government agencies that suffered data breaches, they spent millions of pesos on tools and technologies but were still struck.

2. Problem Statement

What are the primary cybersecurity problems of Philippine businesses, and how do we resolve them effectively?

Cybersecurity problems vary depending on the type of organization and the country where it operates. Industries that process much personal or financial information have more threat actors than those with limited information collected. Organizations that are operating in countries that have detailed cybersecurity laws, as well as dedicated enforcement agencies, help in curbing cyberattacks targeting businesses.

Security awareness and capabilities of organizations also contribute to their preparedness for cyber-attacks. Are the key stakeholders in the organization aware of the importance of cybersecurity? If yes, how do they respond to the cybersecurity needs?

3. State of Cybersecurity in the Philippines

A macroanalysis of the cybersecurity landscape in the Philippines, including political, economic, social, technological, and ecological aspects, provides a broad understanding of the environment.

3.1. Political

Cybercrime laws in the U.S., such as the ECPA (1986) and CFAA (1986), have long addressed electronic crimes. In comparison, the Philippines enacted the E-Commerce Act (RA 8792) in 2000, followed by the Data Privacy Act (RA 10173) (An Act Protecting Individual Personal Information In Information And Communications Systems In The Government And The Private Sector, Creating For This Purpose A National Privacy Commission, And For Other Purposes Republic Act 10173, 2012) and Cybercrime Prevention Act (RA 10175) in 2012, which govern data protection, privacy, and cyber offenses. (Rules and Regulations Implementing Republic Act 10175, 2015)

Table 1: Some Pertinent US Laws on Cybercrime

U.S. Law	Year Enacted	Description
Electronic Communications Privacy Act (ECPA)	1986	Prohibition against employer's monitoring an employee's computer usage, including email, unless consent is obtained.
Computer Fraud and Abuse Act (CFAA)	1986	Criminalizing unauthorized access to computer systems.
Patriot Act of 2001	2001	Tap and trace provisions of existing wiretap statutes to the Internet and mandate certain technological modifications at ISPs to facilitate electronic wiretaps on the Internet.
Gramm-Leach-Bliley Act (GLBA)	1999	Establishment of an opt-out method for individuals to maintain some control over the use of information provided in a business transaction with a member of the financial community.
Sarbanes-Oxley Act (SOX)	2002	Section 404 controls specify that all processes associated with a firm's financial reporting must be controlled and audited regularly. Section 404 requires firms to establish a control-based framework designed to detect or prevent fraud that would result in misstatement of financials.
Health Insurance Portability & Accountability Act (HIPAA)	1996	Ensures medical and health information privacy, including security standards and electronic security provisions.

Regulatory bodies like the BSP have set strict cybersecurity requirements through Circular 808 and BSP 982. (Bangko Sentral ng Pilipinas, 2017) The National Cyber Security Plan 2022 outlines strategic measures to bolster national cybersecurity (DICT, 2019).

Table 2: Some Pertinent PH Laws on Cybercrime

Philippine Law	Year Enacted	Description
E-Commerce Act of 2001 (RA 8792)	2001	Legal recognition of Data Messages and Electronic Documents

		Electronic Transactions in the government Sec. 33 (a) Hacking Sec. 33 (b) Piracy Penalty of min. P100,000 and max. Commensurate to damage and mandatory imprisonment from 6 months to 3 years
Data Privacy Act of 2012 (R.A. 10173)	2012	The law regulates the “processing” of personal data. "Processing" refers to any operation or any set of operations performed upon personal data, including, but not limited to, the collection, recording, organization, storage, updating or modification, retrieval, consultation, use, consolidation, blocking, erasure, or destruction of data.
Cybercrime Prevention Act of 2012 (RA 10175)	2012	Sec. 4 Cybercrime Offenses Offense against CIA Illegal access, interception, interference Misuse of devices Cyber-squatting Cybersex, child pornography Unsolicited commercial communication Libel (Sec 4 c4) Sec. 12 Real-Time Collection of Traffic Data Sec. 13 Preservation of Computer Data Sec. 19. Restricting or Blocking Access to Computer Data. — When computer data is prima facie found to violate the provisions of this Act, the DOJ shall issue an order to restrict

		or block access to such computer data. Sec. 27. Appropriations. — Fifty million pesos (PhP50,000,000.00) shall be appropriated annually to implement this Act.

3.2. Economic

Cybersecurity threats have evolved in sophistication. Research by Dr. Mike McGuire estimates cybercrime revenues at $1.5 trillion globally, on par with Russia's GDP (McGuire, 2018).

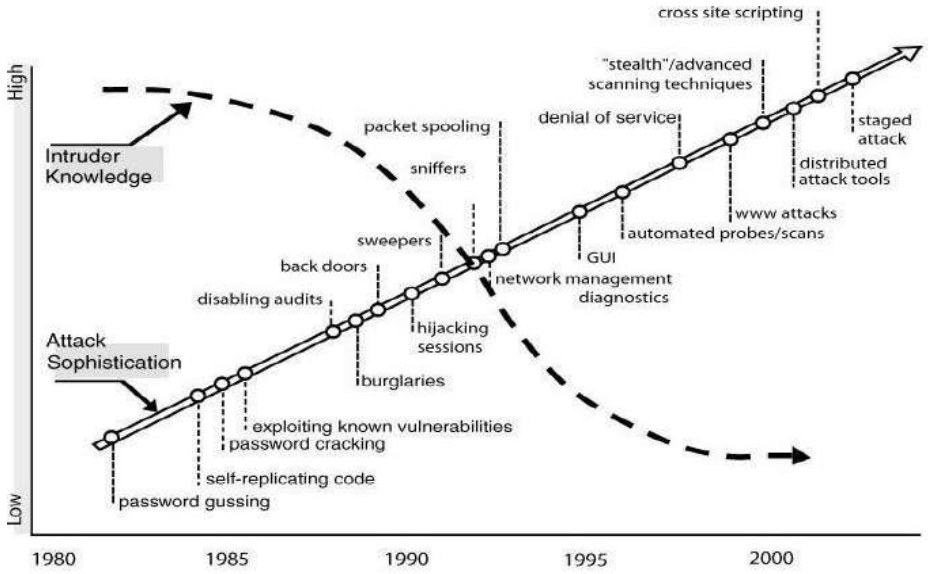


Figure 1: Trend of Attacks Sophistication vs. Intruder Knowledge (Tommy, 2020)

Cybercrime	Annual Revenues*
Illicit, illegal online markets	$860 billion
Trade secret, IP theft	$500 billion
Data trading**	$160 billion
Crimeware/CaaS (Cybercrime-as-a-Service)	$1.6 billion
Ransomware***	$1 billion
Total Generated by Cybercrime	**$1.5 trillion**

*totals are approximate
**Revenues derived from trading in stolen data, such as: credit and debit card information banking login details, loyalty schemes and so on
***Revenues derived from extortions based on encrypting data and demanding payments

Figure 2: Web of Profit Summary

Transnational Crime	Annual Profits
Counterfeiting	$923 billion–$1.13 trillion
Drug Trafficking	$426-$652 billion
Human Trafficking	$150 billion
Illegal Logging	$52-$157 billion
Illegal Mining	$12-$48 billion
IUU Fishing	$15.5-$16.4 billion
Illegal Wildlife Trade	$5-$23 billion
Crude Oil Theft	$5.2-$11.9 billion
Illegal Firearms Trafficking	$1.7-$3.5 billion
Organ Trafficking	$840 million–$1.7 billion
Trafficking in Cultural Property	$1.2-$1.6 billion
TOTAL	**$1.6-$2.2 trillion**

Estimated Global Profits from Transnational Crime

Figure 3: Transnational Crime Summary

Cybercrime is estimated to cost the Philippine economy $3.5 billion (1.1% of GDP), affecting industries and discouraging digital transformation efforts. (Microsoft Philippines Communications Team, 2018) Recent attacks on banks like BDO and UBP highlight the sector's vulnerability. (CNN Philippines Staff, 2022)

3.3. Social

Smartphone use has surged in the Philippines, with affordable brands like Oppo and RealMe catering to lower-income groups, expanding the attack surface for cybercriminals.

With 73 million active social media users, cybercriminals exploit platforms for phishing and fraud. (Estella & Löffelholz, n.d.) In 2021, over 800 cases of online fraud were reported, a fraction of the real impact.

(Cudis, 2021)

Filipinos rank second globally in internet usage, averaging over 10 hours daily. (Baclig, 2022), The extended online time increases the exposure to cyber threats.

3.4. Technological

The proliferation of connected devices, from smart appliances to wearables, expands the attack surface for cybersecurity risks. The shift to digital platforms has accelerated, with payment systems like GCash and PayMaya experiencing significant growth. The shift necessitates strong cybersecurity measures for online transactions. (Lim, 2021) The introduction of Starlink's satellite internet is expected to boost connectivity in remote areas, improving digital accessibility. (Newbytes. P.H., 2022)

3.5. Ecological

Natural disasters like typhoons impact internet infrastructure and availability. Events like Typhoon Odette in 2021 caused widespread internet disruptions, emphasizing the need for business continuity plans. (PAGASA, n.d.)

3.6. Key Insights, Opportunities, and Threats Summary

The summary of the different macroanalysis categories can be found in the table below. It includes the Key Insights, Opportunities, and Threats.

Category	Insights	Opportunities	Threats
Political	Compared with U.S. law, the Philippines' cybercrime legislation is still at an early stage.	Organizations are required by cybercrime law to ensure baseline security for protecting people and information.	With the complexity of cybersecurity legislation, it may be difficult for policymakers to understand technical terms. In order to complete documents, some traditional organizations adhere to cyber law.
Economic	The I.T. sector will be of great benefit to the Philippines economy. Cybersecurity plays a crucial role in supporting Information and Communication Technologies in all sectors and bodies of government.	For example, the statistics and effects of cybercrime on the Philippines' economy should be a good starting point for offering cybersecurity services. It would be essential to	In a cybersecurity incident, governance and executive officers are by nature reactive. Until an attack or breach has happened, they usually make no investments in

		emphasize that cybercrime can affect businesses economically to persuade them about the importance of investing in cybersecurity services.	cybersecurity.
Social	Based on figures and trends, the Philippines will remain one of the most significant internet users in the world, with access to social networking sites and the availability of cheap cellular phones.	As many target consumers use social media, businesses began integrating their products and services. Cybersecurity will need to be reviewed and tested for companies that use technology.	Businesses may limit their cyber security deployment to the features of such third-party websites and applications when using Social Media Network sites.
Technological	Devices, appliances, office spaces, networking equipment, and the cloud are all technologies that need to be secured. It may be a double-edged sword when it comes to information security.	Given that they are employed on the Internet by individuals and businesses, all of these devices need to be secured and protected.	The need to protect against attack vectors, which include a broad range of criminals, is critical given the wide variety of devices connected to the Internet.
Ecological	Cybersecurity services do not directly connect with the ecological aspects of macroeconomic analysis.	The migration to cloud services from brick-and-mortar premises may be a good idea, given the Philippines's susceptibility to typhoons and floods.	Floods and typhoons can temporarily interrupt operations at on-site data centers if no business continuity or disaster recovery plan exists.

4. RESULTS AND ANALYSIS

A market survey was conducted to evaluate the current cybersecurity landscape, identify challenges, and understand how organizations in different industries address their cybersecurity needs. The survey was conducted with 131 respondents, mainly in the I.T. and Banking sectors. It covers organizational roles, cybersecurity teams, challenges, outsourcing practices, and budgeting for cybersecurity services.

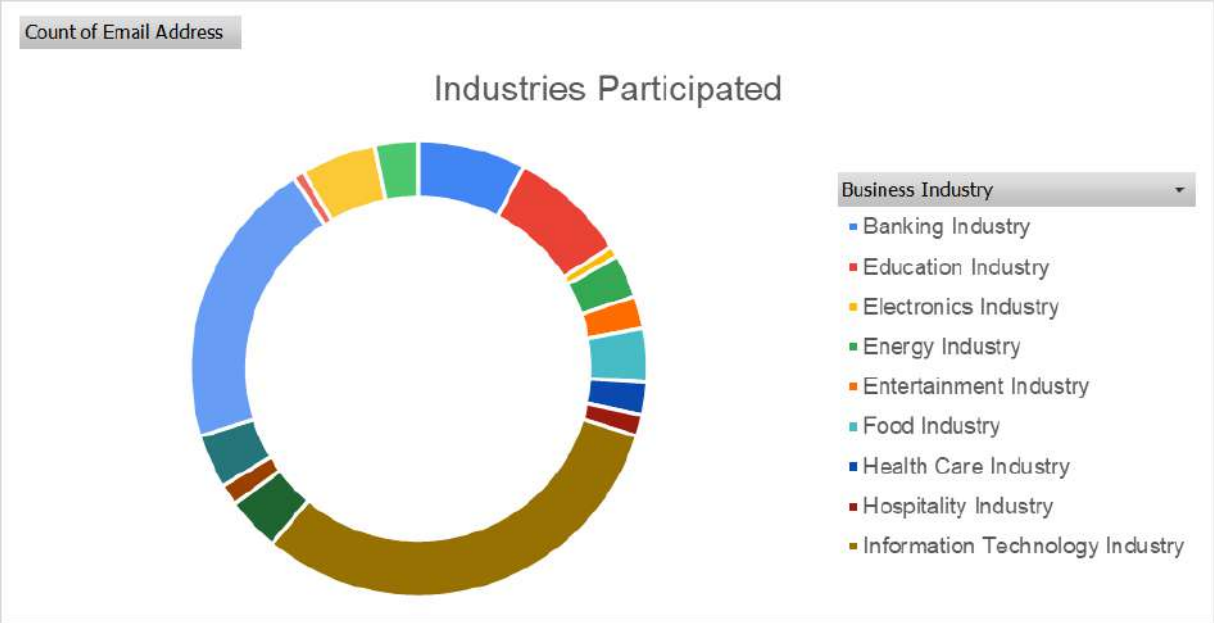


FIGURE 4: SURVEY RESPONDENTS SUMMARY

The industries facing the most cybersecurity challenges based on the survey are:

1. Information Technology Industry
2. Education Industry
3. Banking Industry
4. Telecommunication Industry
5. Food Industry, Manufacturing Industry, and Online/E-Commerce

Nearly half of respondents replied that **Unauthorized Access and Viruses** were among their organizations' security challenges.

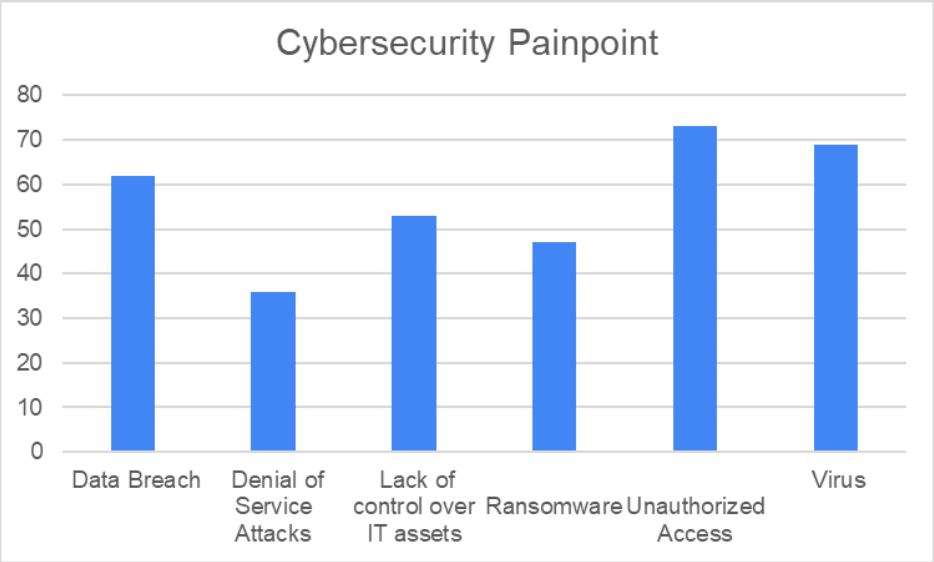


FIGURE 5: CYBERSECURITY PAIN POINTS SUMMARY

The most needed cybersecurity services based on the survey responses are:

- Security Testing, Audit, Awareness, Maturity Assessment, Business Continuity, Data Privacy, Security Operations, Incident Response, Digital Forensics
- Data Privacy
- Security Testing, Audit, Awareness, Business Continuity, Data Privacy, Security Operations, Incident Response
- Awareness

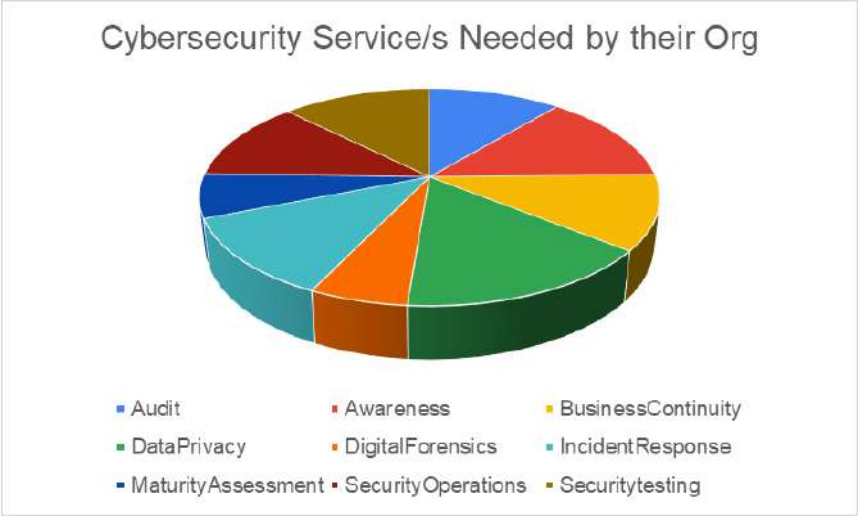


FIGURE 6: CYBERSECURITY SERVICES NEEDED BY THE RESPONDENTS

4.1. Ability to Pay

- When asked how much budget (in Philippine Peso) is allocated to cybersecurity services:
  - 1/4 of the respondents do not have an actual budget
  - 1/4 of the respondents have a budget of below 1 million
  - 1/4 of the respondents have a budget between 1-3 million
  - 1/4 of the respondents have a mixed budget starting at 6 million and up.

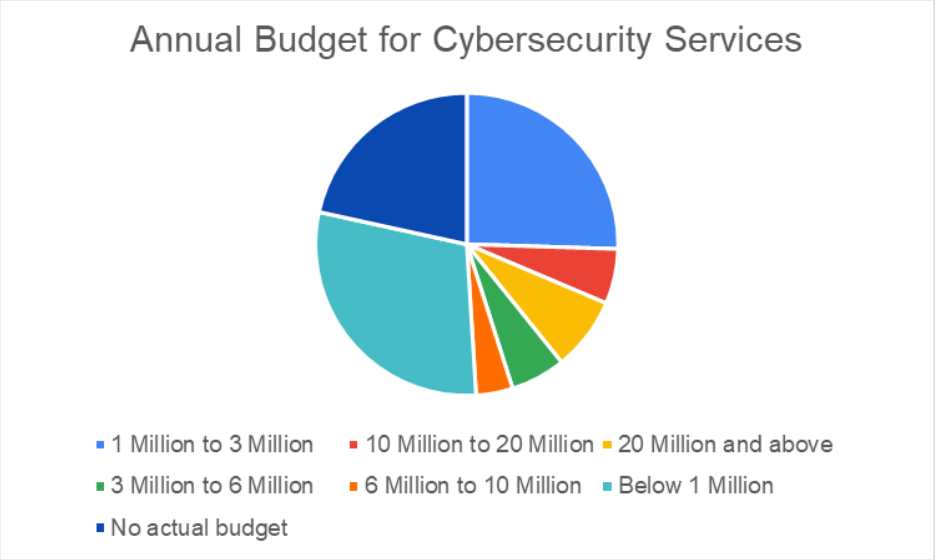


FIGURE 7: ANNUAL CYBERSECURITY BUDGET

Respondents acknowledge the importance of cybersecurity in their respective organizations based on the survey. At the same time, they know what cybersecurity issues they are facing and what areas are needed to improve.

4.2. Relevance of Area for Cybersecurity Services

For cybersecurity services, the area needs to be more relevant. Any organization that processes personal and confidential information must be checked through security assessments and audits.

4.3. Registered Data Protection Officers (DPO) on the National Level

There were 22,915 registered Data Protection Officers in the country, based on the National Privacy Commission's 2018 Annual Report. (National Privacy Commission, n.d.) According to the Data Protection Law or RA 10173, 22,915 organizations must comply with security requirements only in 2018.

4.4. Actual Demand and Supply

The cybersecurity requirements must be met by organizations registered in both BSP and NPC. There are now 22,915 DPAs registered representing their organizations, according to the 2018 report published by the National Protection Committee. Thus, 22,915 organizations have already been managed and controlled by the NPC.[9]

9 https://www.privacy.gov.ph/wp-content/uploads/2020/10/Annual-Report-2018.pdf

For the banks, data from the BSP as of Feb 2022 provides the following numbers[10]:

Table 3: Summary of P.H. Financial Institutions (Feb 2022)

Type of Financial Institution	Number
Universal and Commercial Banks	46
Thrift Banks	46
Rural and Cooperative Banks	411
Non-Banks with Quasi-Banking Functions	6
Non-Stock Savings and Loan Associations (NSSLAs)	60
Offshore Banking Units in the Philippines	1
Representative Offices in the Philippines	11
Non-Banks without Quasi-Banking Functions	31
Total	**612**

4.5. Potential Demand and Supply Analysis

According to the 2020 List of Establishments of the Philippine Statistics Authority (PSA)[11] there is a recorded total of 957,620 business enterprises operating in the country.

TABLE 4: SUMMARY OF # OF MSMES (2020)

Business Enterprise	%	# of Businesses
Micro	88.77%	850,127
Small	10.25%	98,126
Medium	0.49%	4,716
Large	0.49%	4,651
	Total	**957,620**

10 : https://www.bsp.gov.ph/SitePages/FinancialStability/DirBanksFIList.aspx
11 https://www.dti.gov.ph/resources/msme-statistics/

Based on the definition of small, medium, and large businesses concerning asset and employment size, they will be required to register in NPC and comply with the cybersecurity requirements that have been set. The potential demand for cybersecurity services would be **107,493 (11.23%)** registered businesses.

4.6. Trend Analysis and Determination of Critical Variables

Organizations are starting to see the value in preparing their security as a growing number of cyber-attacks, data breaches, and security incidents occur. The presentation of the penalties for failure to comply is, as a rule, an effective instrument in convincing organizations to take cybersecurity into account. Where cybersecurity is introduced with adverse effects, periodic and consistent security awareness can help organizations understand its importance.

Crime	Penalties (Imprisonment & Fine)	
	Personal information	Sensitive personal information
Unauthorized Processing	1-3 years and 500T – 2M	3-6 years and 500T – 4M
Providing Access Due to Negligence	1-3 years and 500T – 2M	3-6 years and 500T – 4M
Improper Disposal	6 months-2 years and 100T – 500T	1-3 years and 100T – 1M
Processing for Unauthorized Purposes	1 year & 6 months – 5 years and 500T – 1M fine	2-7 years and 500T – 2M
Unauthorized access or intentional breach	1-3 years and 500T – 2M	
Concealment of Security Breaches	1 year & 6 months – 5 years and 500T – 1M fine	
Malicious Disclosure	1 year & 6 months – 5 years and 500T – 1M fine	
Unauthorized Disclosure	1 – 3 years and 500T – 1M fine	

Figure 8: Penalties for DPA Violations (An Act Protecting Individual Personal Information In Information And Communications Systems In The Government And The Private Sector, Creating For This Purpose A National Privacy Commission, And For Other Purposes Republic Act 10173, 2012)

Government agencies like NPC and BSP also conduct audits to ensure organizations comply with their requirements. In the same 2018 NPC Report[12], they have conducted 152 compliance sweeps (audits) in various sectors. It can be considered as a wake-up call to organizations to comply and improve their security posture:

TABLE 5: # OF AUDITED ORGS PER SECTOR BY NPC

Sectors	No. of PIC

12 https://www.privacy.gov.ph/wp-content/uploads/2020/10/Annual-Report-2018.pdf

Government (state universities and colleges)	40
Government agencies	6
Retail and direct marketing	29
Banks	22
Hotels	28
Business process outsourcing	9
Health maintenance organizations	7
Life insurance provider	6
Service provider	1
Hospitals	1
Non-bank financial institutions	1
Transportation and logistics	1
Universities and colleges	1
Total	**152**

5. CONCLUSION AND RECOMMENDATIONS

The growth in the number of SMEs in the Philippines is directly proportional to the number of cybercrimes crafted and launched. At the same time, the channels that are available to communicate and transact B2C (Business to Consumers) are also growing, making more entry points for cyber attackers.

With these apparent developments evident in the news, statistics from cybersecurity organizations and government agencies, and actual experiences of businesses, it is imperative to invest in cybersecurity tools and services to put a layered defense against these various cyber attacks.

Cybersecurity investment may be costly, but getting hit successfully by cyber attacks is way more expensive and damaging in the long run.

Organizations may make the following recommendations to determine their cybersecurity posture and identify which cybersecurity areas need to be prioritized:

5.1. Cybersecurity Assessment

Cybersecurity Assessments help identify the organization's cybersecurity posture. Assessments use an industry best practice baseline to help determine how you fare realistically with the rest of the world. The Center for Internet Security (CIS) Controls is one of the many reputable baseline tools an organization can use. A standardized rating system such as the Capability Maturity Model Integration (CMMI) provides an itemized description of the organization's control domain status.

5.2. Security Review and Audit

Another activity that can be done is to conduct a Security Review and Audit of the organization's processes and documentation. It ensures that the things that were put in the policies and standards are executed and monitored consistently.

5.3. Vulnerability Assessment and Penetration Testing (VAPT)

The VAPT service is a technical service that checks the security of a technology (software or hardware) based on a series of security checks and scenarios. The testers usually use an attacker or hacker's point of view (POV) when creating and launching tests. The activity ensures that the network, devices, and applications are secured. The VAPT can be segmented based on the activities conducted and the technology layer involved. For technology layers, the following is the usual scope:

- Host/Server – Checks the security settings and configuration of the computers, servers, mobile devices, or any endpoint device.
- Network – Checks security of the network setup of the I.T. infrastructure.
- Application – Check the security level of any web or mobile application.

5.4. Security Awareness and Technical Training

Technical Training provides upskilling and standardization of knowledge for professionals and prepares them to be knowledgeable in their respective roles. Some organizations align their employee training program to industry-recognized certifications to ensure that the professionals are at par with their international counterparts.

Security Awareness training, on the other hand, enables all stakeholders and employees in the organization to handle common cybersecurity issues such as phishing, smishing, fake emails/news, and hoaxes. It is essential to have a familiar and standard response to these issues and reporting mechanisms to ensure that the organization can track and rectify these security incidents.

When organizations can determine their strengths and weaknesses and empower their constituents to handle security incidents, they can be on the same playing field as the attackers. The critical takeaway is visibility and awareness. Once the organizations know what to protect and how to protect these assets, they can devise the correct response plan. When organizations know the potential threats, they are more prepared to combat and stop them.

6. ANNEX: SURVEY QUESTIONS

The survey aimed to assess the current cybersecurity landscape, identify pain points, and understand how organizations in various industries handle their cybersecurity needs. It explored organizational roles, cybersecurity teams, pain points, outsourcing practices, and budgeting for cybersecurity services.

1. **Company Role/ Position**
   Intention: To identify the respondents' roles within their organization, which helps in segmenting responses based on decision-making authority (e.g., Officer, Manager, etc.).
2. **Department**
   Intention: This provides insight into which departments are concerned with cybersecurity, such as IT, Operations, or Finance, to determine the focus areas for cybersecurity needs.
3. **Business Industry**
   Intention: To categorize respondents by industry (e.g., Banking, IT, Manufacturing), as cybersecurity needs can vary significantly by industry type.
4. **Geographical Coverage**
   Intention: To analyze if cybersecurity challenges differ based on the geographical scope (e.g., Local, National, International) of the business.
5. **Company Size**
   Intention: To determine if cybersecurity readiness and challenges vary with company size, such as small businesses vs. large enterprises.
6. **Does your organization have a Data Protection Officer or DPO?**
   Intention: This question checks if organizations comply with data protection laws by appointing a DPO, which is crucial for regulatory compliance.
7. **What are your organization's Cybersecurity pain points? (Choose all that apply)**
   Intention: To identify the specific areas where organizations are struggling, such as data breaches, lack of awareness, or inadequate tools.
8. **Does your organization have a dedicated Cybersecurity team?**
   Intention: To gauge whether organizations have an in-house team to handle cybersecurity, which indicates the level of commitment to securing their infrastructure.
9. **Which Cybersecurity service/s does your organization use? (Choose all that apply)**
   Intention: To identify the types of cybersecurity services organizations are utilizing, like firewalls, intrusion detection systems, or data encryption.
10. **Do you outsource Cybersecurity services?**
    Intention: To determine if organizations rely on third-party vendors for cybersecurity, which can reveal trends in outsourcing and reliance on external expertise.
11. **If your answer is "No", do you have a plan to explore Cybersecurity services?**
    Intention: This follow-up checks if organizations without outsourced services are planning to implement cybersecurity measures in the future.
12. **Which of the following is the primary criterion when selecting a third-party Cybersecurity provider for your organization?**

Intention: To understand what drives decision-making when selecting cybersecurity vendors—whether cost, reputation, or service history matters most.

13. **What is your annual average budget for a Cybersecurity program?**
    Intention: To gauge the financial commitment of organizations towards cybersecurity, providing an indication of market potential for cybersecurity services.

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Effect Of M-Commerce Adoption on Business Performance of Baking MSMEs in the Philippines

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ABSTRACT

E-commerce has evolved into mobile commerce or m-commerce, allowing customers and merchants to buy and sell goods and services using mobile applications on smartphones and tablets at any time and from anywhere. In the Philippines, m-commerce has aided the growth of micro, small, and medium-sized baking businesses and boosted the economy. This study focused on identifying the relationship between business performance and the nine (9) factors of m-commerce adoption of Baking MSMEs. It implemented a descriptive survey technique using a validated and reliability-tested researcher-made questionnaire. A total of 563 baking enterprises' owners and managers from around the country was surveyed online. Results exhibited a significant difference on the level of influence on seven determinants (Usefulness, Usability, Resources-Capability, Enjoyment, Familiarity, Ease of Learning, and Time Pressure) when grouped according to years of business existence; the longer the years of business existence of Baking MSMEs, the higher the level of influence of the factors of m-commerce adoption. By and large, the degree of influence of factors to m-commerce adoption were the same across various baking business sizes, and gender of owners or managers except Cost-Benefit which demonstrated a lower strength of influence among males, as compared to the other genders, suggesting that men are less cost-sensitive and are more risk takers.

The study concluded that baking MSMEs' m-commerce adoption, as driven by the all nine (9) factors: Usefulness, Usability, Social Acceptance, Resources-Capability, Cost-Benefit, Enjoyment, Familiarity, Ease of Learning, and Time Pressure, showed a positive effect on Business Performance. P-values less than 0.01 indicated that the three factors with the biggest impact on business performance were Enjoyment, Ease of Learning, and Time pressure.

Keywords: M-commerce; E-commerce, Business Performance, MSME; Bakery

1. INTRODUCTION

Micro, small, and medium enterprises (MSMEs) are the backbone of the Philippine economy. They are defined as businesses that process or manufacture goods, produce food, or provide services and have an asset value of at most PhP100 million and employ less than 200 people. MSMEs created 5.7 million jobs, or 63.2 percent of all occupations in the country (SEPO, 2012). Among the top manufacturing industries that generated the most employment, baking of bread, cakes, pastries, pies and similar 'perishable' bakery products ranked second, employing 87,477 people or 6.8% of the total workforce (PSA, 2018).

Meanwhile, the introduction and growth of electronic commerce, or e-commerce, a process of buying and selling goods and/or services through computer networks using specially developed order placement and fulfillment systems, has transformed the way businesses operate (Ayob, 2021). In recent years, e-commerce has evolved into mobile commerce, or m-commerce, which allows customers and merchants to buy and sell goods and services at any time and from anywhere via mobile applications on smartphones and tablets. According to a survey conducted by Social Weather Stations (SWS), 83 % of Filipino homes own at least one cellular phone, whereas only 14 % own a personal computer (SWS, 2019 as cited in Flores, 2020). As a result, the aim of this research is on finding the factors that have a significant impact on baking MSMEs' m-commerce adoption.

The SWS survey conducted last December 2019 found that 45% of the total adult population (ages 18 and above) of 66.2 million in the Philippines has access to the internet. Among these adult Filipino internet users, an overwhelming majority of 98% or around 29.4 million are using Facebook (SWS, 2019 as cited in Flores, 2020). Furthermore, according to advertising firms such as Hootsuite and We Are Social, Filipinos spend an average of 4 hours and 15 minutes each day on social media, about twice as much as the global average (Chua, 2021). Culinary entrepreneurs may benefit from social media, which are interactive technologies that allow people to create, share, and exchange information and ideas in virtual communities and networks, in terms of attracting customers and reducing promotional costs. Also, it serves not only as an avenue for companies to advertise products and services online, but also a platform where both the customers and businesses interact, share information and gain insights (Edosomwan, et al., 2011). The digital marketing era allows consumers to shop online for food products with ease and in an orderly manner (Rizaldi & Fauziah, 2019).

However, even though the Philippines has the greatest number of mobile subscriptions at over 120 million and the highest time spent on social media, the actual time spent by Filipinos for online buying and selling is only about 10 % (Pacheco as cited in Crismundo, 2020). Similarly, according to a survey conducted by the Department of Trade and Industry of the Philippines (DTI) in collaboration with the International Trade Centre (ITC) to assess MSMEs' competitiveness and the impact of COVID-19, only 50% of MSMEs have advertised their products and only 33% have a company website. Out of those companies which do advertise, majority utilize social media, specifically Facebook and the internet to promote their products (ITC, 2020). With only less than 50% of MSMEs in the Philippines which are currently taking advantage of digital marketing or online presence, there is a room for research exploration on m-commerce adoption of small businesses in the country, particularly the baking industry. The lack of related studies specific to the bakery sector and m-commerce is exigent for attention to spread awareness on the importance of m-commerce adoption.

The DTI recognizes the potential of e-commerce in the expansion of Philippine enterprises, and as a result, it developed the Philippine E-Commerce Roadmap (PECR), which initially aimed for a 25 % contribution to GDP by 2020 (DTI, 2016). Even though e-commerce's GDP share was just 3.4 % in 2020, with a baseline value of PhP599 billion, the DTI is currently aiming to raise the number of e-commerce businesses from 500,000 in 2020 to 750,000 by 2021, and one million by 2022. According to the DTI's updated e-commerce roadmap, the sector would be worth PHP1.2 trillion by 2022, accounting for 5.5 percent of the economy (Crismundo, 2021).

Having an m-commerce store has become an essential tool for MSMEs not just for convenience and accessibility, but for them to manage staying afloat amidst the present uncertainties and challenges. By targeting a Facebook baking group of more than 100,000 active members, who are mostly MSME owners or managers, this study gave light to the factors that influence m-commerce adoption of baking MSMEs and its effect on business performance.

2. THE FRAMEWORK OF THE RESEARCH

As a starting point, this study uses the Unified Theory of Acceptance and Use of Technology (UTAUT) model. The UTAUT model was created by Venkatesh, Morris, Davis, and Davis (2003) and consists of four major factors: Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), and Facilitating Conditions (FC). These four crucial important constructs are independent factors that govern how dependent variables are used and acted upon. When these determinants are combined with moderating variables like gender, age, experience, and voluntary system, an indirect effect on behavioral intention or the likelihood of technology use in an organization may be determined (Venkatesh et al., 2003).

According to the UTAUT model, performance expectancy (PE) is a metric that quantifies how effective information technology is in completing a task. Performance expectancy is thought to mitigate the impact of gender and age on behavioral intention (Venkatesh et al., 2003). The UTAUT model's effort expectancy (EE) assesses the system's perceived ease of use. The influence of gender, age, and experience on behavioral intention is anticipated to be moderated by effort anticipation (Venkatesh et al., 2003). Social influence (SI) is a construct under UTAUT that measures the degree of perception of the user based on significant others' beliefs that one should use the system. Gender, age, experience, and system volunteers are thought to limit the influence of social influence on behavioral intention (Venkatesh et al., 2003). The fourth construct in UTAUT is facilitating conditions (FC), which assesses how confident users are that the organization's infrastructure and technical assistance are in place to make system use easier. This variable is thought to moderate the effect of age and experience on behavioral intention (Venkatesh et al., 2003).

Further, UTAUT has been extended to UTAUT2 by Venkatesh, Thong, and Xu (2012) that takes in three more constructs in addition to the previous four, totaling to seven influencing factors. According to Venkatesh et al. (2012), the three new constructs augmented for UTAUT2 are hedonic motivation (HM), price value (PV) and habit (HT). Hedonic motivation (HM) is a new construct in the UTAUT2 that explains the user's pleasure of or fun in using a system. Price value (PV), the second new construct in the UTAUT2, defines the user's understanding of the difference between the perceived benefits and the costs involved (including opportunity costs) in the adoption of the system. Habit (HT), the third new construct in the UTAUT2, describes the users' degree of tendency to perform habitual or routinary behaviors which is rooted in one's past experiences. Positive encounters with a system are thought to naturally lead to the establishment of a positive belief. According to certain studies, HT has a favorable impact on behavioral intention.

A handful of studies around the world made use of the UTAUT and UTAUT2 models to explain the behavioral intention of different technology usage in various industries. While the UTAUT model was used to explain various forms of technology adoption among employees, the UTAUT2 model was used to

explain technology adoption among consumers. For instance, Venkatesh, Sykes, and Zhang (2011) used the UTAUT in the context of clinicians' adoption and usage of Electronic Medical Record (EMR) systems in Australia. EMR systems would benefit healthcare organizations and the patients they represent in a variety of ways. However, doctors' limited adoption and utilization of these systems were considered major hurdles to attaining these benefits.

This approach was put to the test in a hospital that was adopting a new EMR system for a seven-month period. The improved UTAUT predicted 44 percent of the variance in intention, whereas the original UTAUT only predicted roughly 20%. The study's findings revealed that age was the only relevant mediator, with gender, voluntariness, and experience having no bearing (Venkatesh et al., 2011).

Furthermore, in Huang and Kao's (2014) study in Taiwan on the factors influencing phablet (phone and tablet combined) technology acceptability, the second generation of the UTAUT2 was introduced as a theoretical framework. Results demonstrated the direct influence of the habit and the importance of other variables such as use intention, hedonic motivation, and performance expectancy on the acceptance of a new product named phablet. The study's findings were used to build future concept designs, marketing strategy definitions, and new product designs, as well as predict and analyze consumer preferences for future mobile devices.

Eneizan et al., (2019) investigated the factors of customer behavior intention toward mobile marketing in Jordan, a developing nation. The UTAUT2 was used in the study, which was expanded to incorporate two new variables: 'trust' and 'risk.' According to the findings of the same study, customers' behavioral intentions about the adoption of mobile marketing are influenced by performance expectancy, effort expectancy, hedonic incentive, social influence, price value, facilitating factors, habit, and risk. The trust component, on the other hand, was revealed to be a non-significant predictor in this region. The study found that the UTAUT2 model worked well in the realm of mobile marketing.

Lee, Sung, and Jeon (2019) used an extended UTAUT2 model with information quality to validate the key determinants affecting continuous use intention for food delivery apps in a study in Korea called Determinants of Continuous Intention on Food Delivery Apps: Extending UTAUT2 with Information Quality. The study used variables such information quality, performance expectation, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit to determine the determinants for using delivery app services. The study's findings demonstrated that performance expectations, social influence, and habit were drivers that influenced meal delivery app users' intention to use the app indefinitely. Results of the study also supported that user were influenced by peers. Furthermore, with performance expectancy as the mediating variable, the additional variable included, information quality, was demonstrated to positively influence continuous use intention. However, it was found that simplicity of use, favorable conditions, hedonic motivation, and price value were not important criteria in determining whether or not delivery apps would be used indefinitely (Lee et al., 2019).

Hence, UTAUT2 theory lays the groundwork for this study. UTAUT2 is further expanded by the researcher to consider other variables such as perceived ease of learning (EOL) and perceived time pressure (TP) of the users of the system who are mostly owners or managers of these small businesses. Ease of learning

(EOL) assessments are made early in the learning process before active learning begins. Every time a person will learn something new, EOL judgments are initially formed, and self-awareness of one's thinking and learning are assessed. To get a sense of how challenging the topic to learn would be, looking through the materials in advance would be a great idea. Thus, it is important to investigate ease of learning judgments because they are thought to influence our study habits and learning. They happen before learning, are always inferential, and consider about things that have not been learned yet (Nelson and Narens, 1994 as cited in Jemstedt, Kubik, & Jönsson, 2017).

The effect of ease of learning on new technologies was studied by Loraas and Diaz (2011) in the field of accounting and auditing. The study concluded that when a technology is perceived to be easy to learn, a simple suggestion from an authority is all needed to invoke intentions to learn. If a voluntary technology is seen to be difficult, people are less likely to try to learn it if it goes against their natural inclination. This lengthy cognitive process is assumed to be due in part to the risk associated with the decision. Risk is likely to be widespread in the decision-making process in a highly competitive work environment, such as auditing and consulting. As a result, future users should be given compelling reasons to use a tool in order for it to have a stronger impact on decisions (Loraas and Diaz, 2011).

On the other hand, 'time pressure,' according to Goodin, Rice, Bittman, and Saunders (2005), is the amount of 'free time' available for an individual after subtracting the number of hours spent on inescapable daily activities such as paid labor, unpaid home labor, and personal care (eating, sleeping, grooming and so on). The strategy, however, is defective from the start. Those activities could be obligatory in the sense that they represent tasks that must be done. People can dedicate more time or effort to them than is strictly necessary. Even if it is necessary to spend some time sleeping and earning money, most people sleep and earn more than is strictly necessary (Goodin et al., 2005).

Being "time poor" means not having enough time to complete all of one's tasks (Vickery, 1977 as cited in Goodin, et al., 2005) which seems to be prevalent in contemporary societies. There is some dispute about whether or not paid work time is increasing. However, as more working women and dual-earner couples work a 'second shift' at home following a full day at work, total time spent on paid and unpaid household labor is rising overall. The time spent on those three categories of duties — compensated labor time, unpaid home labor time, and personal care time – adds up to time spent on "obligatory" activities (Robinson, 1977 as cited in Goodin, et al., 2005). As a result, deducting the time spent on necessary activities yields the remainder of one's time, generally referred to as "free time."

Moreover, the study on time pressure by Kocher and Sutter (2006) suggested that time pressure would affect the quality of decision-making negatively. Thus, they proposed an induction of time-dependent incentive scheme which significantly improved the quality of time-pressured or quick decision-making. Bigger focus or effort levels appear to be triggered by the possibility of significantly higher payoffs, resulting in better results. According to the study's findings, using time-dependent monetary rewards to substantially speed up decision-making without sacrificing quality may be a realistic option if decisions must be made under extreme time constraints (Kocher and Sutter, 2006).

To understand the factors that lead these enterprises, specifically the Micro, Small and Medium Baking Enterprises to adopt m-commerce in conducting their business online, UTAUT2 constructs are utilized as main bases for establishing the independent variables that influence m-commerce adoption of baking businesses. The UTAUT2 is further augmented in this study. Important constructs, Perceived Ease of Learning and Perceived Time Pressure are added in the independent variables, totaling to nine constructs as presented in Figure 1.

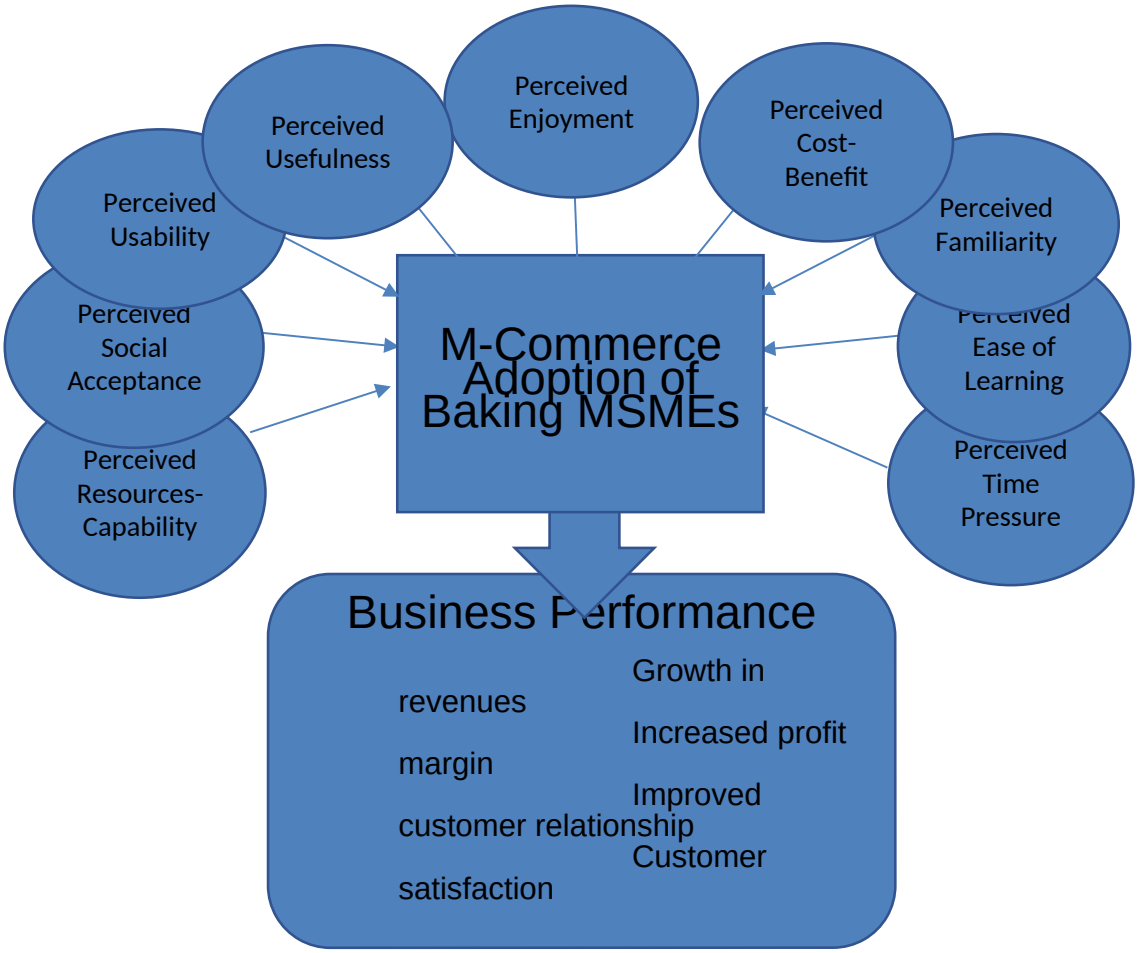


Figure 1. Effect of M-Commerce Adoption on Business Performance

The effect of m-commerce adoption by Baking MSMEs to business performance would consequently be measured. Key performance indicators such as revenue growth, profit margin increase, customer relationship improvement and customer satisfaction were identified and correlated with factors of m-commerce adoption.

Financial performance metrics have historically been used to determine a company's worth though data basically would show what the company has accomplished in the past. The true worth of the company must, however, include future position. Thus, non-financial performance indicators are necessary to predict what will happen with financial results in the future, so that the firm's value can be determined by real financial progress as well as forward-looking non-financial performance measures (Kristensen, Martensen, and Gronholdt, 2000). Hence, to evaluate a company's performance, both financial and non-financial metrics may be used. Benefit before taxes and turnover are financial indicators, whereas consumer satisfaction and referral rates, delivery time, waiting time, and employee turnover are non-financial steps. Recognizing the disadvantages of relying solely on financial or non-financial indicators, modern MSMEs have embraced a hybrid methodology that integrates both financial and non-financial metrics. These metrics serve as a blueprint for actions in the future (Chong, 2008).

Furthermore, according to the study of Williams and Naumann (2011), there are significant and moderate-to-strong links between satisfaction levels and a company's business success. There are close ties between customer loyalty, retention, sales, and earnings per share or stock price, to name a few. There tend to be several advantages to higher levels of customer satisfaction. Higher customer satisfaction rates result in higher levels of customer retention and contract renewals. According to the findings, customer satisfaction was positively linked to earnings per share, sales, net profits, stock price, Tobin's q, and price earnings ratios at the firm level of study (Williams and Naumann, 2011).

The relationship between customer satisfaction and company performance indicators were continuously demonstrated over time, including cycles of strong economic growth and periods of recession (Bernhardt et al.,2000 as cited in Williams and Naumann, 2011). Morgan and Rego (2006), for example, looked at the importance of generally advocated and frequently computed customer satisfaction and loyalty indicators in forecasting firms' potential business performance. Findings of the study suggested that customer feedback metrics could be useful in predicting a company's success. Results also provided new empirical insights into the relationship between customer satisfaction and loyalty and business results (Morgan and Rego, 2006).

3. METHODS

This paper aimed to present how baking enterprises adopt mobile commerce based on the nine factors identified. Since this study implemented a quantitative research design, it employed a descriptive survey method utilizing a researcher-made online survey questionnaire that was completed by 563 owners and managers of micro, small and medium baking enterprises in the Philippines. The respondents were active members of a Facebook group exclusive for baking enthusiasts, who were in the different regions in the Philippines.

A pilot test survey was conducted and tested for reliability. All factors rendered a Cronbach's Alpha higher than 0.80 which signifies a high internal consistency as presented on Table 1. The reliable and valid instrument was administered online through a cloud-based survey system called Survey Monkey, which allowed respondents to answer conveniently using their mobile devices. The instrument consisted of 2 major sections: Business Profile and 4- Point Likert Scale measuring the degree of influence of nine constructs. The survey questionnaire contained a total of 43 items and each respondent spent an average of six (6) minutes to complete the survey.

Data gathered in this study were tested using frequency, simple percentage, weighted mean, Analysis of Variance (ANOVA), Pearson Correlation, and Multiple Regression Analysis.

Table 1. Item Analysis of Factors

A. Factors of M-Commerce Adoption	**Cronbach's Alpha**
1. Usefulness	0.9137
2. Usability	0.8254
3. Social Acceptance	0.8570
4. Resources-Capability	0.9143
5. Cost-Benefit	0.8111
6. Enjoyment	0.9701
7. Familiarity	0.8853
8. Ease of Learning	0.9286
9. Time Pressure	0.8841

4. RESULTS AND DISCUSSION

This study has identified nine (9) factors that may influence mobile commerce adoption among Baking MSMEs which include Usefulness, Usability, Social Acceptance, Resources-Capability, Cost-Benefit, Enjoyment, Familiarity, Ease of Learning, and Time Pressure. The degree of influence of each factor is measured using a 4-scale Likert Scale where 4 means that the influence is high, 3 means that the influence is moderately high, 2 means that the influence is low, and 1 means that there is no influence.

Table 2. Summary of Degree of Influence of Factors on M-Commerce Adoption

Factor	**Mean**	**Descriptive Rating**
Usefulness	3.62	High Influence
Usability	3.63	High Influence
Social Acceptance	3.64	High Influence
Resources-Capability	3.71	High Influence
Cost-Benefit	3.34	High Influence
Enjoyment	3.76	High Influence
Familiarity	3.64	High Influence

Ease of Learning	3.58	High Influence
Time Pressure	3.56	High Influence
Grand Mean	**3.61**	**High Influence**

RANGE	*DESCRIPTION*	*EQUIVALENT*
3.26 - 4.00	Strongly Agree	High Influence
2.51 - 3.25	Agree	Moderately High Influence
1.76 - 2.5	Moderately Agree	Low Influence
1.00 - 1.75	Disagree	No Influence

To sum up, all factors have a high influence on m-commerce adoption of Baking MSMEs as summarized in Table 2. Among the factors, Enjoyment has the highest rating of 3.76. On the other hand, Cost-Benefit factor has the lowest rating of 3.34 though still within the range of high influence.

The overall mean for Usefulness variable is 3.62 which indicates that it has a high influence on m-commerce adoption of Baking MSMEs. M-commerce has been an indispensable tool for the baking enterprises to grow their business and reach a wider market. Time saved from doing business transactions with the use of mobile applications also greatly impacts the Baking MSMEs' m-commerce adoption. Thus, Usefulness is considered a high influencing factor.

Factor average score for Usability dimension is 3.63 which shows that it has a high influence on Baking MSMEs' m-commerce adoption. The ease of navigating the internet on mobile devices and the convenience of doing business online using mobile applications such as Facebook and other services strongly impact the m-commerce adoption of Baking MSMEs. Hence, Usability is perceived as a high influencing factor.

Moreover, the overall mean for Social Acceptance dimension is 3.64, which signifies a high influence on Baking MSMEs' m-commerce adoption. This means that the more baking businesses adopt m-commerce, the higher the rate of proliferation of Baking MSMEs in the digital world.

Resources-Capability receives a high overall rating of 3.71 in the survey, indicating that it has a significant impact on Baking MSMEs' adoption of m-commerce. Given that 100% of the Baking MSMEs are selling online, it can be deduced that having an internet connectivity and at least one (1) mobile device are the most essential resources that Baking MSMEs are capable of.

In general, Cost-Benefit factor still generates a rating of 3.34 which stands for high influence. The result of the study suggests that m-commerce's benefits outweigh its costs, thus, the strong hold on Baking MSMEs' adoption. On the other hand, a moderately high influence of one item pertaining to availing Facebook paid ads means that most Baking MSMEs are not so affected by the cost and benefit of Facebook advertising. Possible reasons for the nonchalance are underusage, non-practice, or ineffectiveness of this feature.

By and large, Enjoyment is a highly influencing factor to Baking MSMEs' m-commerce adoption with an overall mean of 3.75. This speaks of the fun experience brought about by m-commerce to the Baking MSMEs. It is surmised that Baking MSMEs are enjoying and pleased by doing their business online especially with the use of mobile phones.

The overall mean score of 3.64 for the construct Familiarity, alludes to a high influence on the Baking MSMEs m-commerce adoption. This means that these enterprises are not new to online retailing business, or at least do not have zero-knowledge on online selling.

In total, the degree of influence of Ease of Learning factor is high at 3.57. This leads to the conclusion that m-commerce is easy to learn; thus, more establishments, particularly baking MSMEs are moving into the new system of conducting their businesses online with the use of mobile devices.

Furthermore, the overall mean of 3.56 symbolizes the high influence of Time Pressure on their m-commerce adoption. It can be inferred that Baking MSME managers have good time management skills as they are able to do time-consuming tasks related to online retailing such as monitoring customer orders and feedback online, posting announcements or ads on the business page, and answering customer queries promptly.

It can be deduced that Baking MSMEs consider their happiness or pleasure in doing business online using mobile devices as the most influential factor in their m-commerce adoption. Meanwhile, the factor wherein cost is involved is at the bottom of the list among the highly influencing factors on Baking MSMEs' m-commerce adoption. It can be inferred that cost, although very important, is not what owners of Baking MSMEs are most concerned with.

Table 3. ANOVA on Significant Difference on the Extent of Influence Among Factors of M-Commerce Adoption When Grouped According to Years of Business Existence

Factors	**<1 yr.**	**1-2 yrs.**	**3-5 yrs.**	**6-10 yrs.**	**P-value**	**Decision**	**Description**
1. Usefulness	3.52	3.68	3.66	3.68	0.002*	Reject null	There is a significant difference
2. Usability	3.53	3.70	3.64	3.73	0.002*	Reject null	There is a significant difference
3. Social Acceptance	3.62	3.68	3.61	3.64	0.374	Failed to reject null	There is **no** significant difference
4. Resources-	3.64	3.77	3.70	3.92	0.009*	Reject null	There is a significant

Capability							difference
5. Cost-Benefit	3.29	3.36	3.34	3.54	0.226	Failed to reject null	There is **no** significant difference
6. Enjoyment	3.68	3.81	3.76	3.85	0.018*	Reject null	There is a significant difference
7. Familiarity	3.55	3.70	3.66	3.78	0.005*	Reject null	There is a significant difference
8. Ease of Learning	3.51	3.63	3.52	3.78	0.009*	Reject null	There is a significant difference
9. Time Pressure	3.48	3.62	3.60	3.67	0.032*	Reject null	There is a significant difference

**There is a Significant Difference at ANOVA p-value <= 0.05*

One-way Analysis of Variance (ANOVA) was performed to examine the significant difference on the extent of influence among factors of m-commerce adoption. The extent of influence was investigated through grouping of Baking MSMEs by years of business existence, business size, and gender of the business owner or manager.

A significant difference was found on the extent of influence among factors of m-commerce adoption when grouped according to the years of business existence of the baking MSMEs. The results show that seven (7) out of nine (9) factors have significant differences in the degree of influence on baking enterprises' m-commerce adoption, based on years of existence as outlined in Table 3.

Factors such as Usefulness, Usability, Resources-Capability, Enjoyment, Familiarity, Ease of Learning, and Time Pressure have different levels of influence on baking MSMEs depending on their years of business existence.

Apparently, startups or very young enterprises with less than a year of business existence, perceived these factors to have influenced their m-commerce adoption slightly at a lower intensity as compared to the magnitude of influence perceived by established or older businesses. This can be attributed to the shorter m-commerce experience of younger companies as opposed to that of more established baking enterprises. Hence, the longer the years of business existence of baking MSMEs, the higher the level of influence of the factors of m-commerce adoption.

On the other hand, Social Acceptance and Cost-Benefit factors do not have a significant difference on the level of influence to aking MSMEs at different years of business existence. It can be inferred that the strong influence of peers, colleagues or the community affect every Baking MSME's m-commerce adoption, regardless of business' years of existence.

Moreover, all baking businesses at different years of business existence are affected by the Cost-Benefit factor at a similar degree of influence on their m-commerce adoption. As a result, it is safe to assume that the cost of a new system, such as m-commerce, has a bearing on the decision of Baking MSMEs to fully embrace it.

Table 4. ANOVA on Significant Difference on the Extent of Influence Among Factors of M-Commerce Adoption When Grouped According to Business Size

Factors	Micro	Small	Medium	P-value	Decision	Description
1. Usefulness	3.62	3.9	3.67	0.680	Failed to reject null	There is no significant difference
2. Usability	3.63	4.0	3.75	0.510	Failed to reject null	There is no significant difference
3. Social Acceptance	3.64	3.88	3.67	0.764	Failed to reject null	There is no significant difference
4. Resources-Capability	3.71	3.75	3.75	0.987	Failed to reject null	There is no significant difference
5. Cost-Benefit	3.34	4.00	3.58	0.223	Failed to reject null	There is no significant difference
6. Enjoyment	3.75	3.87	4.00	0.602	Failed to reject null	There is no significant difference
7. Familiarity	3.64	3.88	3.50	0.707	Failed to reject null	There is no significant difference
8. Ease of	3.57	4.0	3.67	0.473	Failed to	There is no

Learning					reject null	significant difference
9. Time Pressure	3.56	3.88	3.50	0.703	Failed to reject null	There is no significant difference

The business size of the baking MSMEs -- micro, small, or medium -- is determined by considering the asset size and number of employees of the business as defined by DTI (SEO, 2012). The result of One-way ANOVA on the extent of influence of factors of m-commerce adoption to Baking MSMEs when grouped according to business size proved to have no significant difference as demonstrated on Table 4.

It can be concluded that the degree of influence of factors of m-commerce adoption is the same across various business sizes – Micro, Small, and Medium Enterprise in the bakery sector.

Table 5. ANOVA on Significant Difference on the extent of Influence Among Factors of M-Commerce Adoption When Grouped According to Gender of Business Owner or Manager

Factors	**Male**	**Female**	**LGBTQ+**	**P-value**	**Decision**	**Description**
1. Usefulness	3.58	3.62	3.60	0.917	Failed to reject null	There is no significant difference
2. Usability	3.47	3.64	3.75	0.338	Failed to reject null	There is no significant difference
3. Social Acceptance	3.52	3.65	3.60	0.485	Failed to reject null	There is no significant difference
4. Resources-Capability	3.62	3.72	3.60	0.662	Failed to reject null	There is no significant difference
5. Cost-Benefit	2.98	3.35	3.50	0.043 *	Reject null	There is a significant difference
6. Enjoyment	3.66	3.76	3.80	0.653	Failed to reject null	There is no significant difference

7. Familiarity	3.53	3.64	3.75	0.599	Failed to reject null	There is no significant difference
8. Ease of Learning	3.31	3.58	3.70	0.098	Failed to reject null	There is no significant difference
9. Time Pressure	3.41	3.57	3.75	0.378	Failed to reject null	There is no significant difference

**There is a Significant Difference at ANOVA p-value <= 0.05*

The one-way ANOVA rendered no significant difference on all aspects except on Cost-Benefit factor as presented on Table 5.

It is reckoned that the scale of influence of the determinant, Cost-Benefit, on baking MSMEs varies depending on the gender of the business leader. Financial management approaches may vary among different genders. Women, for example, take fewer risks than males because men and women are intrinsically different by nature, and these differences, rather than prejudice, force them to run their businesses differently (Robb and Watson, 2012). Likewise, studies disclosed that female-owned companies are often known to have lower levels of start-up funding and are more likely to be part-time rather than full-time ventures (Kiefer et al.,2020); hence, costs concerns may be prioritized, and expenses be kept at minimum.

Evidently, this study supports those previous findings. Cost-Benefit factor has the same level of influence on m-commerce adoption of baking MSMEs with owners or leaders who are either Female or LGBTQ+, which implies that women and those who belong to LGBTQ+ behave in a similar way in terms of making financial decisions.

Conversely, the lower strength of influence of Cost-Benefit factor among males, as compared to the other two genders, suggests that men are less cost-sensitive and are more risk takers. Therefore, the degree of influence of the Cost-Benefit element on m-commerce adoption of Baking MSMEs indeed varies across leadership genders.

Finally, the nine (9) factors of m-commerce adoption by Baking MSMEs were tested for correlation with Business Performance. Results have shown a significant positive correlation between all the determinants and Business Performance as shown in Table 6.

Table 6. Pearson Correlation Among Factors of M-Commerce Adoption and Business Performance (n=563)

Factors of M-Commerce Adoption	**Business Performance**

	Pearson Correlation
1. Usefulness	0.617
2. Usability	0.644
3. Social Acceptance	0.543
4. Resources-Capability	0.537
5. Cost-Benefit	0.608
6. Enjoyment	0.709
7. Familiarity	0.632
8. Ease of Learning	0.650
9. Time Pressure	0.723

However, using Multiple Regression Analysis, the strong effect of the Factors of M-Commerce Adoption is manifested only on five (5) out of nine (9) factors; namely, Usefulness, Enjoyment, Familiarity, Ease of Learning, and Time Pressure as shown on Table 7. Enjoyment, Ease of Learning and Time Pressure demonstrate the strongest effect on Business Performance with p-value less than 0.01.

Table 7. Multiple Regression Among Factors of M-Commerce Adoption and Business Performance

Factors of M-Commerce Adoption	**P-Value**
1. Usefulness	0.029*
2. Usability	0.415
3. Social Acceptance	0.365
4. Resources-Capability	0.161
5. Cost-Benefit	0.186
6. Enjoyment	0.000*

7. Familiarity	0.027*
8. Ease of Learning	0.002*
9. Time Pressure	0.000*

**There is a Significant Relationship at p-value <= 0.05*

5. CONCLUSION

In this era, the trend is to go digital, even for baking goods and services. The evolution of e-commerce to now m-commerce becomes the "new business district" for all types of businesses around the globe due to the creation of applications that are easily installed on smartphones and other mobile devices. Moreover, external circumstances like the pandemic catapult all businesses big and small to adapt to this digital era to thrive.

This study concludes that baking MSMEs adopt m-commerce because of the strong influence of these factors: Usefulness, Usability, Social Acceptance, Resources-Capability, Cost-Benefit, Enjoyment, Familiarity, Ease of Learning, and Time Pressure and their effect to Business Performance. Usefulness and Cost-Benefit factors acknowledge that m-commerce helps these small businesses grow their business by reaching more customers, thereby increasing sales, and gaining more benefits than incurring costs. Usability, Ease of Learning, and Familiarity factors allow sellers to easily adapt to the new way of conducting business because of its offered convenience, simplicity, and manageability. Resources-Capability and Time Pressure factors provide MSMEs the means to access the web with the mobile devices, internet connectivity, and enough time to be able to manage an online business. Lastly, Social Acceptance and Enjoyment factors fill the need of the users in terms of sense of belongingness and fulfillment.

The Unified Theory of Acceptance and Use of Technology 2 by Venkatesh et al. (2012) has been augmented by the researcher to add two (2) equally essential factors, Ease of Learning and Time Pressure, wherein both are proven to have a strong positive effect on Business Performance. The proponent coined these constructs as The Nine (9) Factors of M-Commerce Adoption (Augmented UTAUT 2 Model).

6. RECOMMENDATIONS

The researcher recommends baking MSMEs to participate in m-commerce trainings and workshops which intend to help small businesses maximize the benefits of m-commerce adoption and improve business performance. Topics may include Maximizing Benefits of M-Commerce using Facebook for Baking MSMEs, Paving the Way for Baking MSMEs' Success and the Philippine Economy, Digital Marketing for Baking MSMEs, and Cost-Benefit Analysis: The M-Commerce Retailer's Perspective. The goal is to increase the number of successful e-commerce / m-commerce enterprises in the Philippines.

Moreover, since this study focuses only on the factors that influence m-commerce adoption of Baking MSMEs, thus, the researcher recommends pursuing the following research studies:

1. A Study on the Likelihood of Opening a Physical Store for Baking MSMEs. Results of the survey revealed that only 15% of the Baking MSMEs sell at a physical store that accompanied their online shop. Hence, there is an opportunity to delve deeper into the possibility of these MSMEs to open a physical store sooner if not later. Conducting a study on this specific topic will provide insights on the factors that drive the Baking MSMEs to open a physical store.

2. The Extent of Use of Delivery Applications Among Baking MSMEs. Nowadays, modern consumers are shifting from doing actual visits on stores to online shopping, which has been notably spurred by the pandemic. Thus, Baking MSMEs, regardless of form (physical or online), require the help of delivery services. Branching out of m-commerce, a specific study on the use of delivery applications by Baking MSMEs will provide insights on the extent of delivery app usage and the problems encountered.

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Web-Based Market Validation for Small And Medium Sized Enterprises In a Developing Economy

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ABSTRACT

Developing economies such as the Philippines often struggle with limited resources, support, and personnel, making market validation for Small and Medium sized Enterprises (SMEs) a challenge. Existing validation methods can be costly and complicated, requiring significant time and resources. This study aimed to address these challenges by developing a market validation model for SMEs using the Startup Business Company Validation Methodology (SBCVM). This methodology offers a unique approach that assesses SMEs across four dimensions: customer, market, product, and business using targeted assessment questions, enabling entrepreneurs to enhance their business plans before placing significant investments in their business ideas. Initial findings show positive reception among entrepreneurs, finding the SBCVM model user-friendly and innovative. Pilot testing involved 10 local SME respondents recognizing the model's SME validation potential. To further validate the model, a web-based market validation system broadened participation and reach. Involving 50 beta testers, highlighting the customer dimension's relevance while ranking the business dimension as the least pertinent in the assessment tool. Respondents noted the system as valuable, appreciating the assessment tool's results for their ventures. Recommendations include simplifying complex questions, with larger-scale validation participants is suggested. This research underscores web-based market validation tools' potential benefits, providing an accessible and cost-effective solution for SMEs in developing economies. In summary, an accessible and tailored market validation model is crucial for SMEs in developing economies. The SBCVM model's value and entrepreneurs' positive response contribute to overcoming market validation challenges, supporting entrepreneurial success especially in these economies.

Keywords: Startup Business Company Validation Methodology (SBCVM); Small and Medium sized Enterprises (SME); Market Validation; Web-based Market Validation tool; Developing Economies.

1. BACKGROUND OF THE STUDY

Market validation is crucial for SMEs to thrive by gathering feedback from potential customers and improving their products. It is the process of determining if there's a need for your product in your target market. (Stevenson et al., 2022). However, existing validation models can be expensive and time-consuming, making it challenging for SMEs in developing economies with limited resources. (Eldin, 2012; Fabijan et al., 2015; Escolano, 2022). Traditional and manual market validation methods like focus groups, in-person interviews, and field surveys can be costly, time-consuming, and have limited reach, hindering

SMEs in achieving accelerated growth. On the other hand, online market validation models such as online surveys and web applications are more efficient, cost-effective, and have a wider reach. Simple and cost-effective market validation models can help SMEs validate their business ideas and products efficiently. (Fabijan et al., 2015; Bessedik et al., 2012; Escolano, 2022). Despite the popularity of these online models, many of them require expensive subscription plans that may also limit SMEs' growth in the early stages of their entrepreneurial journey, especially for SMEs in developing economies. According to the Encyclopedia of Information Systems and United Nations (2020), developing economies, formerly known as LDCs or lesser-developed economies, face challenges like inadequate support, economic imbalances, slow growth, and low incomes. (Onno, 2020). SMEs have emerged as a solution to address poverty in these economies, driving economic transformation and sustainable development. (Morris et al., 2020; Si et al., 2020; Sutter et al., 2019). These factors emphasize the pivotal role of innovation capabilities in enhancing business sustainability and strengthening competitive advantages for entrepreneurs in SMEs (Asad et al., 2020; Hanaysha et al., 2022). It is hypothesized that innovating a market validation model tailored for SMEs in developing economies holds the potential to narrow the divide between SMEs and their path to success.

The SBCVM is a self-guided method that helps entrepreneurs with limited business experience to systematically evaluate and validate their business idea. (Eldin, 2012; Fabijan et al., 2015). The SBCVM provides SMEs with a distinct approach to market validation through its comprehensive evaluation of four critical dimensions: customer, market, product, and business. Using targeted assessment questions tailored to each dimension, Entrepreneurs can efficiently validate their business ideas and make informed decisions. (Eldin, 2012). The lack of suitable validation for SMEs as well as the manual process of the SBCVM process poses limitations in terms of applicability and accessibility, particularly in developing economies. To address this, there is a need to optimize the SBCVM method through streamlining its process, enabling a more efficient, and accessible approach for SMEs in these economies. This involves automating and customizing the assessment questions, creating quantifiable validation metrics, and offering users the capability to test their minimum viable product (MVP) across the four dimensions easily. (Eldin, 2012). By streamlining its processes, it enables a cost effective and accessible option that eliminates labor- intensive tasks, especially in easily algorithmized tasks. This creates a heuristic logical method that connects technical potential with the realization of economic value to developing economies. (Bez & Chesbrough, 2020; Jakub Glowacki & Tomasz Geodecki, 2020). The customization of the SBCVM model configures the assessment questions by assigning an opportunity confidence level (OCL) score, a scoring system implemented to indicate areas for improvement in the SMEs business venture. (Eldin, 2012; Bessedik et al., 2012). The resulting OCL scores are calculated through weighted average computation where the results are weighted based on their relevance per SMEs to ultimately determine which among the four dimensions are needing improvement. The obtained results are then tested to validate the effectiveness and reliability of the SBCVM model, providing initial validation of its capabilities. By subjecting the model to real-world scenarios and gathering feedback from the SMEs, the researchers can assess its performance and identify any areas that require further improvement. This study explores the potential of the SBCVM and establishes a comprehensive compendium that streamline the process and test the resulting alternative model for SMEs in developing economies to ultimately empower

Entrepreneurs to make data-driven decisions, enabling them to navigate the complex landscape of business validation and make informed choices.

2. METHODOLOGY

2.1. Customization of SBCVM Model for Developing Economies

The customization processes illustrated in figure 1 involve the evaluation of the SBCVM process which determines the areas to be modified to make the alternative SBCVM model.

Figure 1: Customization process of the SBCVM model. *The Authors*



2.1.1. Evaluating the SBCVM model

This study aims to conduct a comprehensive analysis of the existing SBCVM model in terms of its strengths, weaknesses, scope, and limitations to find areas of improvements and modify the existing model. (Namugenyi et al., 2019; Benzaghta et al., 2021; Pradhan and Ray, 2021). The study

Table 1: Retained, modified, & added areas on the SWOT analysis of the original model.

	Retained	Modified	Added
Strength	✓		✓
Weaknesses		✓	
Opportunity	✓		
Threats		✓	

The authors began with an exploratory data analysis of the SBCVM and related literature to identify potential improvements and possible anomalies. Exploratory data analysis is an important initial step for any knowledge discovery process, in which researchers interactively explore unfamiliar datasets by issuing a sequence of analysis operations. (Milo et al., 2020). Using SWOT analysis, the researchers modified, retained, and added new functions to the original model, thereby developing an alternative SBCVM model. (Namugenyi et al., 2019; Benzaghta et al., 2021). Specifically, structural and behavioral model analysis are conducted to identify areas needed to modify, retain and add. Table 1 shows the metrics that determine which areas of the structural model require retention, modification, or addition. To enhance the original SBCVM model, the researchers analyze the outcomes of the SWOT analysis to identify potential areas for improvement and propose hypothetical modifications to its structure that is discussed in the following sections.

Following the analysis and modification of the structure of the original SBCVM, the researchers recognized the importance of investigating its behavioral characteristics before finalizing any modifications to the

alternative model. Figure 2 visually represents the behavioral model of the original SBCVM. As highlighted by Sherwood (2012), systems possess distinct behavioral traits that significantly impact the business design process. This understanding allows researchers to anticipate and influence system behavior, comparing the emergent properties of the original and alternative models. Emergent properties encompass unexpected qualities that arise from the collaborative functioning of a system, independent of any specific component. (Dennis, 2012; Pradhan & Ray, 2021). The comparison also involves mapping the activity diagram of both models. This aids in identifying the changes made during the retained, modified, and added phases.

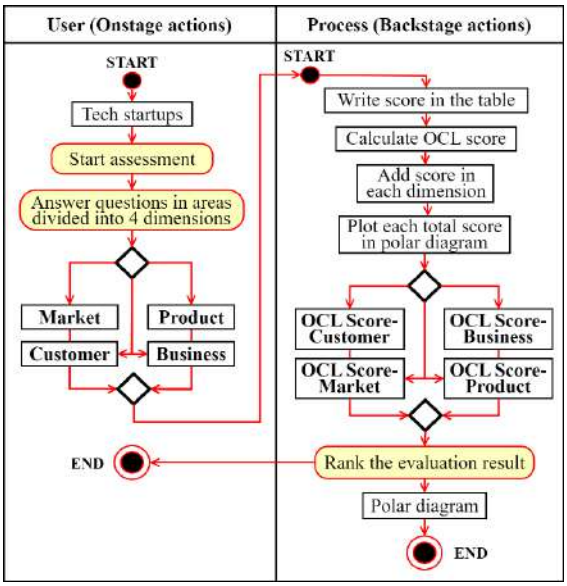


Figure 2: As-is behavioral model of the original SBCVM.

2.1.2. Modifying the SBCVM Model

Defining these structural and behavioral aspects is important to help develop a formula that will assess SMEs based on the original SBCVM model. The researchers focused on the customization method for the OCL score and defined its unique scaling indicators. They then added Key Performance Indicators (KPIs) to measure the confidence level of every question within each dimension. (Eldin, 2012). According to Stauffer (2018), indicators provide an effective tool to measure progress and performance. Generally, an indicator is a manageable set of information that gives a sense of the bigger picture. To develop the scoring method, the researchers remodeled the OCL scoring method from the original SBCVM model and configured its parameters. They formulated a weight per each question by studying its relevance to the SMEs, and assigning a weight to it based on the result of the SWOT analysis. (Benzaghta et al., 2021). A rating scale is used to determine if a question had high or low relevance to each type of SMEs to justify the weight calibration. According to Steve Blank, SME classification helps founders and mentors establish the level and types of support the business needs and helps all involved pinpoint where to focus founders' attention

and what external support is required. (Euchner and Blank, 2021; Blank and Eckhardt, 2023). This paved the way to add additional types of SMEs – Small, Tech, Social and Scalable SMEs which will be discussed in the following sections to address the different weights per question in the original SBCVM model. The researchers searched for common type of SMEs in developing economies using related literature and empirical data. Basic mathematical rules for linear equations are followed for arithmetic operations to be used to calculate the average score per dimension and the results of the averages of four dimensions are then mapped for the summation of their total score for the overall SME assessment. The weight per question was subject to validation, which will have a separate discussion in the model validation phase. The total score for the overall SME assessment was calculated by using the average score per dimension and mapping the results of the four dimensions.

2.1.3. Modelling the SBCVM Method

The researchers integrated the SBCVM model including the OCL scoring method into a digital platform, allowing a select group of respondents to pre-test and validate the digitized alternative SBCVM model. This integration enables the respondents to interact and observe how the market validation formula evaluates their business idea and provide validation feedback from their observation and the results it provides for the assessment of their SME. The digital platform should have remote accessibility, a user interface, and be capable of performing arithmetic operations to establish mathematical functions that do the actual calculation of the OCL scoring for the four dimensions. (Gobble, 2018; Bloomberg, 2018). To achieve this, the researchers employed customized computer programming techniques, logic, and formula which are encoded and edited in the platform, ensuring consistent and compatible integration of the formula into the digital environment, setting up the stage to validate the digitized alternative SBCVM model.

2.2. Validation method of the Customized SBCVM Model

In order to validate the effectiveness of the digitized alternative SBCVM model, the researchers have conducted a pilot tester orientation and testing, followed by an evaluation. The pilot testing phase was designed to test and refine procedures prior to conducting the actual experiment. According to Offenberger, (2019) and a recent article from Oregon State University (2022), pilot testing is a crucial small-scale study that helps ensure the tool's functionality and efficiency. For this study, the researchers have chosen entrepreneurs who have prior experience in the field of a SME and are willing to test and provide their feedback for the modified SBVCM model validation. To acquire the necessary respondents, promotional materials are being distributed through social media channels. Interested respondents are then reviewed, briefed, and asked for their consent to participate in the study. (Jiang et al., 2021). Additionally, target respondents should have undergone similar validation processes such as incubations, customer discovery, and conferences as a means of market validation. It is also ideal for respondents to be computer literate to easily assess the model's functionality and provide unbiased feedback. (Offenberger, 2019; Walters & Rodriguez, 2017; Jiang et al., 2021).

The chosen respondents are oriented on how to use the market validation tool using digital platforms. They will then conduct a pilot test to determine whether or not the designed tool works efficiently. Once

the testing phase is complete, the respondents should provide their feedback to the researchers using online forms (Braun et al., 2021). Based on the results, the researchers evaluated the alternative SBCVM model's effectiveness before proceeding to validate the model to large-scale respondents. The study progresses with the respondents briefed to test and evaluate the functionality and effectiveness of the SBCVM methodology in assessing SMEs within the context of the developing economy (Walters & Rodriguez, 2017). This evaluation includes assessing the included types of SME and weight per question, which are not included in the original SBCVM model. This approach was done to maximize the study's relevance by providing an improved and digitized model of the SBCVM methodology. The researchers acknowledged the importance of training the respondents to accurately obtain the goals of the study. Walters and Rodriguez (2017) noted that effective training of respondents enhances the accuracy of data collection and interpretation. The selected respondents were also guided using virtual conferencing tools and briefed on how to use the digitized model. The researchers allotted at least 20 minutes to an hour orienting the participants on the model's parts, the four dimensions, the process of answering the model, and how to evaluate it using online forms (Walters & Rodriguez, 2017; Jiang et al., 2021). This approach ensured that the respondents understood the model's concept and could provide unbiased feedback. Following the orientation, the selected respondents proceeded with testing the model. To do so, they were instructed to first choose a type of SMEs and then score the questions in the OCL based on their relevance to their own SME. This was done virtually using a computer in an online-enabled environment.

Throughout the testing process, the researchers provided guidance and support to ensure that the respondents have a clear understanding of each dimension of the model. The objective of testing is to verify that the functionalities are working as intended in the model. (Walters & Rodriguez, 2017; Jiang et al., 2021). This can be measured by observing that the users answer each question and that an assessment result is generated. Moreover, the model's effectiveness can be assessed by presenting the generated results of the respondents and comparing their average scores (Jiang et al., 2021). This enabled the researchers to confirm that the model is performing as designed before proceeding to integrate it into a web-based market validation tool for further validation. The success of this testing process was crucial to the overall research project as it helped ensure the reliability and validity of the alternative SBCVM model. Ashraf and Sara, (2017) emphasized the importance of testing to ensure the proper functioning of any model before its implementation, which is essential to maximize the potential impact of the research project.

The pilot testers were asked to evaluate the assessment results and provide feedback on the alternative SBCVM market validation model. Researchers used online survey forms to gather data, including the respondent's background, evaluation of model functionality, and general feedback on the market validation process. (Offenberger, 2019; Walters & Rodriguez, 2017; Jiang et al., 2021). Table 2 shows the pre-testing validation metrics and its data type, which were used to help validate the alternative model. The evaluation metrics assessed the model's ease of use, navigation, understandability of questions, relevancy, result feedback, areas for modification, overall experience, and general feedback (Pradhan and Ray, 2021). These evaluation metrics consisted of both ordinal and nominal types of categorical data, which helped researchers pre-validate the model (Pradhan and Ray, 2021; Jiang et al., 2021). They asked

the respondents to evaluate the model right after testing with the intent to retain their judgment and assess the model honestly within a reasonable time.

Table 2: Pre-testing validation metrics and its corresponding data type.

Evaluation metrics	Data type	
	Categorical	
	Ordinal	Nominal
1. The spreadsheet model is easy to use and navigate.	✓	
2. The instructions/guides in the model are clear and easy to follow.	✓	
3. In general, are the questions of the model easy to understand?	✓	
4. From a total of 32 questions in the model, which one do you think is irrelevant from its dimension and why?		✓
5. After answering all questions, what are your comments about the results and conclusions?		✓
6. Are there areas of the model that you want to be removed or added?		✓
7. Overall, how was your experience while using the model?		✓
8. Lastly, What are your thoughts about an automated market validation in the form of a website, rather than answering from a spreadsheet model?		✓

2.3. Development of the web-based market validation tool

Developing a web-based market validation tool that integrates the SBCVM model involves the following process that requires technical expertise in software development and SME entrepreneurship. To develop the application in a timely manner, researchers followed the waterfall model, which involved a step-by-step approach to software development (Petersen et al., 2009). The process began with the preparation of the computing environment, where developers ensure that the application and integrated development environment (IDE) is optimized for performance and usability (Bessedik et al., 2012). This model ensures that each stage of the development process is completed before moving on to the next one, minimizing errors and optimizing the application's functionality (Petersen et al., 2009; Bessedik et al., 2012; Shackel, 2009). Cloud computing is an effective option for deploying the web-based market validation tool as it provides cost-effective and scalable infrastructure (Bouyer et al., 2014). Once the web-based market validation tool is developed and deployed, user validation and testing are necessary to optimize its performance and ensure its effectiveness. The development involves coding the front end for accessibility and back-end modules to handle the computation including the translation of formula into code snippets, which requires a deep understanding of the model's underlying principles. The tool will be designed and implemented using Hypertext Markup Language (HTML), Cascading Style Sheet (CSS), and JavaScript with the node.JS web framework, and hosted on GitHub for high availability and scalability (Dias, 2016). The software development process will follow industry practices and standards, including version control, code review, testing, and documentation. Lastly, the tool's performance and usability will be evaluated using various testing and evaluation methods including performance analysis (Shackel, 2009). This ensures seamless functionality and performance of the web-based market validation tool which paves the way for evaluating its validation process.

2.4. Evaluation methods of the web-based market validation tool

The web-based market validation tool was evaluated for relevance and accuracy through collecting, evaluating, and analyzing data from 100 beta-testers consisting of entrepreneurs in the Philippines. This was done using a comprehensive test suite that covers all parameter combinations (Dias et al., 2007; Sadikin, 2012). Additionally, the data was processed by defining beta-testers, data cleaning for errors and redundancy to ensure the quality of the data gathered (Bansal et al., 2021). This phase processed and explored data using descriptive techniques before using it for analysis including the use of richer scale. To collect data, the researchers created a survey that users could complete after using the web-based market validation tool (Taherdoost, 2016; Bansal et al., 2021). This survey collected users' perceptions and expectations while testing and validating the web-based market validation tool. The collected data was then analyzed using a self-administered questionnaire survey, which allowed for the collection of information required to answer specific research questions not available from other sources. This methodology has the primary advantage of facilitating the collection of data necessary for the study (Taherdoost, 2016; Sadikin, 2012; Bansal et al., 2021). After gathering data, the researchers visually inspected each respondent's results from the web-based market validation tool and manually checked each record in a spreadsheet. A data cleaning workflow was executed to remove duplicate, irrelevant, and inaccurate data, fix structural errors, and identify missing data (Chu et al., 2016). To estimate the amount of missing data, calculations were performed to determine the accuracy of the analysis. Data audit validation was done to ensure that all rules and constraints were executed and to gain useful insights for evaluation (Dias et al., 2007; Sadikin, 2012). Lastly, data profiling was conducted to sort and analyze the cleaned data. The analysis of the collected data followed a systematic process as depicted in Figure 3, which gauged the system's Usability, Accuracy, Functionality, Applicability, Relevancy, Relatability, and Perceived Value (Macakoglu et al., 2022). This approach helped identify key indicators including the strengths and weaknesses of the system, providing valuable insights into its overall performance (Macakoglu et al., 2022; Phadermrod et al., 2019). Figure 3 highlights the analysis process to generate the evaluation results of 100 beta testers.

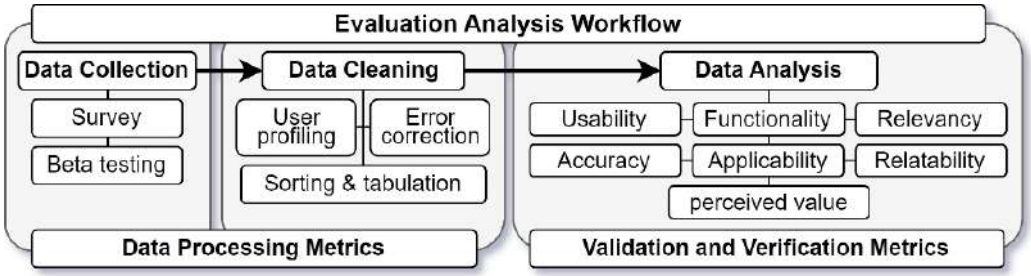


Figure 3. Evaluation Analysis Workflow of the Web-based Market validation tool.

3. RESULTS AND DISCUSSIONS

3.1 Customized SBCVM Model for Developing Economies

3.1.1. Evaluation results of the SBCVM model

The researchers have conducted an extensive analysis of the original SBCVM model and its strengths, weaknesses, scope, and limitations to develop an alternative SBCVM model (Namugenyi et al., 2019; Benzaghta et al., 2021). The researchers used the original SBCVM algorithm as the basis for the alternative market validation model, which was then analyzed in terms of its structural and behavioral design for assessing SMEs. The researchers made modifications to the original design by retaining some functions, modifying others, and adding new ones. Through exploratory data analysis, it was found that the original SBCVM model validates SMEs based on four dimensions (Customer, Market, Product, and Business), which consist of assessment questions that have their own measure of confidence level. (Eldin, 2012; Fabijan et al., 2015; Milo et al., 2020). This approach helps entrepreneurs better understand their concepts through a series of questions and is also used as a reference for why the researchers came up with the weight per item. The results of the SWOT analysis were illustrated in figure 4, which helped the researchers map the potential areas for improvements for the modified model. (Namugenyi et al., 2019; Benzaghta et al., 2021). This includes the four dimensions, added SME types, and OCL scores interpretation as elaborated in Figure 5 where the shaded areas indicate the added improvements and unshaded ones represent the retained functions.

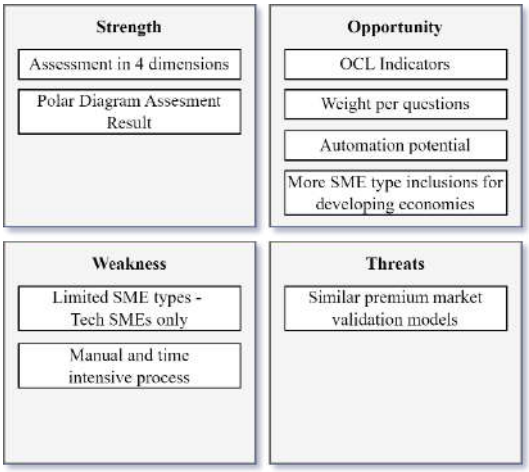


Figure 4: SWOT analysis of the SBCVM model.

3.1.2. Modification results of the SBCVM model

The researchers found out that aside from the four dimensions, there are different classifications of SMEs that can affect the sustainability and longevity of a product or service. (Blank & Eckhardt, 2023; Euchner & Blank, 2021). To address this, different types of SMEs are added as one of the bases for determining the weight of each question based on the type of SME, with supporting references for each question to maximize accuracy. The modifications made to the original SBCVM model were based on a thorough analysis of its strengths and weaknesses, as well as the inclusion of different SME types and supporting references to each question. (Namugenyi et al., 2019; Benzaghta et al., 2021). The use of SWOT analysis helped identify areas of improvement and guide the researchers in modifying the model.

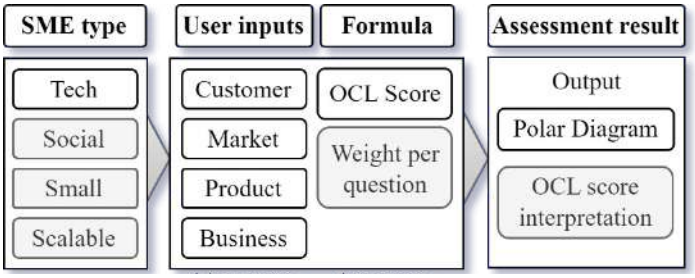




Figure 5: Modified SBCVM model assessment process.

The researchers' redesign of the original SBCVM model structure involved retaining, modifying, and adding new functionalities based on the findings of the SWOT analysis. (Namugenyi et al., 2019; Benzaghta et al., 2021). Table 3 presents a breakdown of the specific areas that were retained, modified, or added to the alternative SBCVM model. Notably, the researchers added three SME types to the model, namely social, scalable, and small SMEs. They found out that there might not be absolute SME types. For instance, there are social SMEs that are also small businesses, or tech-focused SMEs that are also social SMEs, or any combinations thereof (Euchner and Blank, 2021; Blank and Eckhardt, 2023). However, for the sake of simplicity and to cater to the target users and respondents who are new to the field of business venture, the researchers decided to classify SMEs into only four types: tech, social, small, and scalable. The addition of SME classification is aligned with Steve Blank's recommendation, which asserts that it helps founders and mentors determine the level and types of support needed by a business. (Euchner and Blank, 2021; Blank and Eckhardt, 2023). Furthermore, the researchers aimed to develop a system that guides SME founders in their entrepreneurial journey. It is worth noting that the alternative SBCVM model is more suited for inexperienced and new entrepreneurs rather than experienced or serial entrepreneurs, who are likely to be familiar with the majority of the principles covered in the model (Eldin, 2012). Table 4 presents an overview of the general characteristics of the SME types, including the tech SME that were retained in the study. Other retained areas are the strengths, the four dimensions, and the polar diagrams.

The researchers made significant adjustments to the assessment questions by specifying each area into 32 questions and changed the English syntax structure without altering the meaning, with input from various experts in the field. The aim was to make the questions easily understandable and address the time-intensive process of market validation (Eldin, 2012; Bez & Chesbrough, 2020; Jakub Glowacki & Tomasz Geodecki, 2020). Additionally, the researchers made the alternative SBCVM model unique by modifying Eldin's methodology to ensure that no intellectual property is infringed from other market validation systems. These modifications presented in Table 3 and 4 provide a clear framework and foundation that guide entrepreneurs and mentors them in their business ventures which is subject to validation, as discussed in the following results.

Table 3: Outline on the modifications to the alternative SBCVM Model.

Retained	Modified	Added
4 Dimensions	Opportunity confidence level (OCL)	OCL score interpretation
Polar diagram	Assessment questions (Measurement of confidence level)	Weight per questions
Tech SMEs	32 questions in each area	Small, Scalable, and Social SMEs
		General criteria for measurement of confidence level

Table 4: Overview of the general characteristics of the SME types.

Type of SMEs	General characterstics
Social SMEs	Nonprofits and charitable SMEs
Tech SMEs	Companies that bring technology products or related services to market
Scalable SMEs	Businesses built to be bought out
Small SMEs	Self-starter, indie companies with small teams

The OCL scoring method was used to assess the potential of SMEs. The OCL score value ranges from 1 to 10, where a score of 1 to 4 indicates a very low opportunity, 5 to 8 indicates a medium opportunity, and 8 to 10 indicates a high opportunity. To determine the dimension of the OCL score, the researchers followed Eldin's formula, which is to get the average score of each dimension. This allowed for an indication of whether a particular dimension yields a high or low opportunity confidence level, or whether it requires more attention compared to other dimensions. They found that the OCL scoring method is similar to a Likert scale, which is a compilation of indicators and statements presented for a real or hypothetical topic of research (Willits et al., 2016). Figure 6 shows the Likert scale indicators used in the study. This highlights the set of statements derived from relevant literature, ensuring that respondents can provide impartial responses.

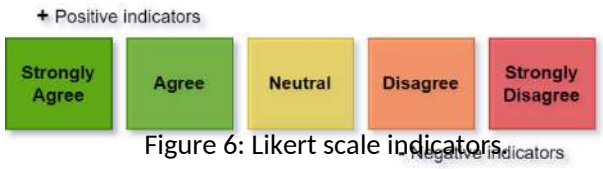


Figure 6: Likert scale indicators

The use of the Likert scale in research is influenced by various factors, including the position of neutrality and the respondents' comprehension of the topic. Researchers may modify the scale to suit their needs and to enhance the validity of their study. In this particular study, the Likert scale was modified into a point scale to allow users to select an exact value that they prefer (Joshi et al., 2015). The point scale used in this study had five scales: Very Low, Low, Medium, High, and Very High. The Likert scale is a collection of assertions or items that are presented to participants for a real or hypothetical event (Joshi et al., 2015). Participants are then asked to indicate their degree of agreement with the statements provided which are interdependent, and collectively show a certain feature of the attitude toward the subject.

3.1.3. Modelling results of the SBCVM model

To model the validation process, a mathematical formula that follows the SBCVM market validation process was used (Otto et al., 2008). Equation 1 shows the computation formula, which weighs the user input based on SME type which provide data for the dashboard output including the polar diagram and its corresponding OCL score interpretation. (Otto et al., 2008; Eldin, 2012). This simplified equation is part of the scoring mechanism for determining the OCL score.

(1)

Where is the weighted OCL score for all dimensions, *x*n is the weighted OCL score for each dimension, q is the questions multiplied by the weight per questions, and *t*n is the total number of questions per dimension.

Alpha (α) represents the OCL score for the SME, and x1, x2, x3, and x4, which are the weighted scores for the customer, market, product, and team dimensions, respectively. (Eldin, 2012; Otto et al., 2008; Dias Neto et al., 2007). Users can input values for q and weights for w for each of the 32 questions, where the lowest score value is 1 and the highest is 10. These values are multiplied by

their corresponding weights, which are assigned based on the selected SME type, as shown in Table 5. Table 5 models the structure and the denoted unit for the variables indicated in Equation 1. There are a total of seven assessment questions in market, product, and business dimensions respectively and 11 questions in customer dimension. (Eldin, 2012). Every question in the dimension has corresponding weights based on the SBCVM scoring mechanism.

Table 5. Scoring mechanism of SBCVM questions to be integrated into web-based application with its weights per SME type.

Dimensions	**Questions** *(qn)*	**SME type** *(wn)*			
		Social	Tech	Scalable	Small
Customer *(x1)*	1. Does your product/service address unemployment rate?	*n*	*n*	*n*	*n*
	2. … 10.	…	…	…	…
	11. How confident are you that your target customers can use or avail your product/service concept with ease?	*n*	*n*	*n*	*n*
Market *(x2)*	12. How large is the target market for your product/service concept?	*n*	*n*	*n*	*n*
	13. … 17.	…	…	…	…
	18. Does your marketing plans align to your desired market?	*n*	*n*	*n*	*n*
Product *(x3)*	19. Is your product/service concept significantly new to the market?	*n*	*n*	*n*	*n*
	20. … 24.	…	…	…	…
	25. How well can you describe your UVP (Unique Value Proposition) as a founder towards your team?	*n*	*n*	*n*	*n*
Business *(x4)*	26. How well-defined do you think is your business model?	*n*	*n*	*n*	*n*
	27. … 31.	…	…	…	…
	32. Are the strategies for IP protection for your product/service concept well defined?	*n*	*n*	*n*	*n*

The researchers utilized Google Spreadsheets as the primary tool for conducting the digitized market validation remotely. It was chosen because of its ability to be shared with respondents remotely and its capacity to perform arithmetic operations through its functions and cell configuration. (Amouzgar 2019; Jiang et al., 2021). The researchers noted that although Microsoft Excel has better plugins and commands, Google Spreadsheets' ability to collaborate with multiple users simultaneously made it a more suitable tool for conducting guided validation with remote participants. (Amouzgar, 2019). To integrate the alternative SBCVM model, the researchers created a new document and encoded the model's formulas into the platform using a computer. These formulas were then integrated into the platform digitally, adjusting each cell layout and configuration, and encoding appropriate logical and arithmetic functions including formula 1, OCL scoring metric, 32 questions in the four dimensions, and their corresponding weights that follows the structure of scoring mechanism highlighted in Table 5. This configuration paved the stage to test and validate the alternative SBCVM market validation with ten entrepreneurs through Google Spreadsheet.

3.2. Validation results of the Customized SBCVM Model

The evaluation of the modified SBCVM model involved the selection of 10 respondents who have experience in the field of SMEs. They were tasked to validate the model and provide feedback. while testing their own SME. To ensure a thorough evaluation, the researchers conducted an orientation through Google meet video conferencing website for virtual meetings, a popular validation method when surveying is conducted through computer aided applications. (Rubinger et al., 2020; Gelner et al., 2023). The respondents were sought through social media and their background or data profiling was collected after signing informed consent forms. The selection of respondents was based on their proactive participation and willingness to critique the alternative model, as well as their eligibility to have already sustained their SME and possess relevant experience in similar market validation processes. (Jiang et al., 2021). The results of the selection process are presented in Figure 7a, which shows the number of testers per SME type, and Figure 7b, which shows the corresponding type of market validation experience prior to model testing. By selecting respondents with relevant experience, the researchers were able to assess whether or not the respondents had a clear understanding of how to answer the assessment questions that are targeted around SME concepts.

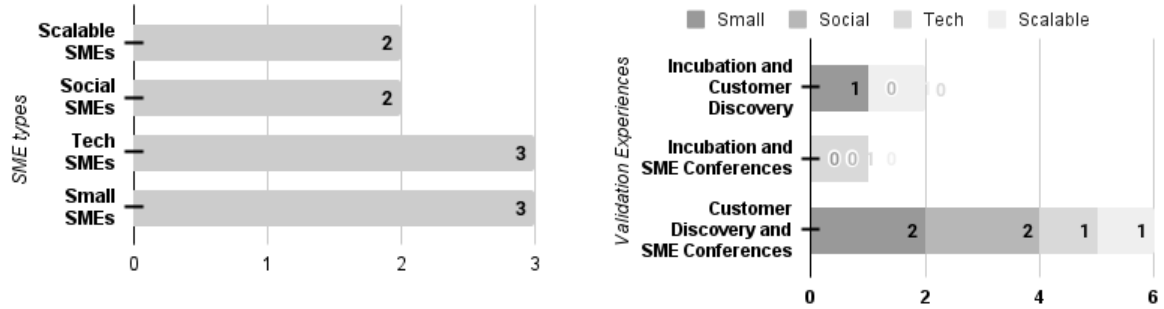


Figure 7: (a) Number of pre-testers per SME type; (b) Entrepreneurs' prior experiences to similar market validation methods per SME type.

A virtual meeting using Google meet was conducted to train the 10 respondents individually, each of them being briefed in a separate meeting about the process for answering and the evaluation of the alternative SBCVM model (Rubinger et al., 2020; Gelner et al., 2023; Pradhan and Ray, 2021). During testing, the 10 respondents were observed and guided through the alternative SBCVM model. The model successfully generated individual assessment results for each respondent which were consolidated to calculate their individual weighted OCL average results per dimension as shown in table 6. The model's functionality, including the calculation of the weighted OCL score and the formula behind generating the average OCL score per dimension, was tested without any noticeable errors (Dennis, 2012; Pradhan & Ray, 2021). Additionally, the researchers also found out that model testing is an important step in the creation of a model (Schwaninger et al., 2018). It aids in the selection of the model to represent the data and the prediction of how well the chosen modifications of the model performs in the future.

Table 6: Pre-testers average OCL score results per SME type with their corresponding names.

Pre-testers' SME names	4 Assessment dmensions			
	Customer	Market	Product	Business
1. Medispatch *(MP)*	7.24	4.63	7.66	5.07
2. EnergyStove *(ES)*	7.18	6.77	7.14	8.9
3. Real Foods PH *(RF)*	4.8	6.03	5.63	4.87
4. Fresco Hydroponics *(FH)*	8.11	7.09	6.34	5.2
5. Masque Aura Fashion Covers *(MAFC)*	5.35	5.49	3.09	2.63

5. Masque Aura Fashion Covers *(MAFC)*	5.35	5.49	3.09	2.63

The evaluation of total average results across different dimensions was conducted to determine the relative performance of the four types of SMEs. Figure 8 provides a comparative analysis of SME type scores based on their weighted equivalence to the 32 assessment questions. The research findings revealed distinctive patterns in the scores obtained by each SME type across various dimensions. Within the business dimension, scalable and tech SME exhibit higher average scores. This outcome aligns with the nature of business-related questions that focus on a SME's capacity to expand and secure patents for their products or services. (Euchner and Blank, 2021; Blank and Eckhardt, 2023). Conversely, small and social SMEs face inherent limitations in achieving such milestones, contributing to comparatively lower scores in the business dimensions. Regarding the customer dimension, all SME types demonstrate nearly identical average scores.

This outcome stems from the shared objective among SMEs to develop products or services that align with perceived customer demand, emphasizing their customer-centric approach. (Escolano, 2022; Blank and Eckhardt, 2023; Si et al., 2020; Sutter et al., 2019). In the Market dimension, all SMEs exhibit similar average scores, except for social SMEs. This disparity can be attributed to the distinctive purpose of social SMEs, which revolves around fulfilling a social mission or goal. (Morris et al., 2020; Escolano, 2022; Euchner and Blank, 2021; Si et al., 2020). Consequently, their target market or market reach tends to be more focused or limited, leading to variations in their average scores within this dimension. Finally, in the product dimension, social SMEs achieve the highest average scores. This result can be attributed to the unique nature of social SMEs, leveraging their Minimum Viable Product (MVP) or Unique Value Proposition (UVP) to create innovative and impactful products (Morris et al., 2020; Si et al., 2020; Sutter et al., 2019; Blank and Eckhardt, 2023). These findings provide valuable insights into the performance of different SME types across multiple dimensions that highlights the diverse challenges and opportunities that each SMEs encounters within specific areas of assessment. Understanding these dynamics allows entrepreneurs to make informed decisions and leverage their strengths in pursuit of success and contribute further to the economic growth of developing economies (Morris et al., 2020; Si et al., 2020; Sutter et al., 2019; Eldin, 2012).



Figure 8: Pre-testers average OCL score results comparison per SME types.

This phase presents the evaluation results obtained through online platforms, specifically using Google forms for data collection. (Braun et al., 2021). Table 8 provides an interpretation of the pilot testers' feedback regarding the market validation model. Through the utilization of a four-point Likert Scale, it was observed that the majority of respondents strongly agreed with the model's ease of navigation and clear instructions. Notably, 87% of the 10 respondents expressed their strong agreement that the assessment tool effectively generates results for their SMEs. These findings signify the successful implementation and development of the alternative SBCVM model using a spreadsheet model, indicating its readiness for further validation by a larger pool of respondents through a web-based application.

Table 8: Feedback of alternative SBCVM model usage.

Feedback of alternative SBCVM model usage						
Rating	Number of testers (Raw response count)				Results	
	Strongly Agree (4)	**Agree (3)**	**Disagree (2)**	**Strongly Disagree (1)**	**Average Mean**	**Overall Interpretation**
Easy to navigate	9	1	0	0	3.9	Strongly Agreed
Clear instructions	6	4	0	0	3.6	Strongly Agreed
Satisfactory results	6	4	0	0	3.6	Strongly Agreed

The assessment of question complexity plays a crucial role in evaluating the respondents' ease of understanding on the jargon used in the web-based market validation tool as it may distort the meaning or perception among the users with different backgrounds if complex or technical phrases were used. (Schwaninger et al., 2018; Braun et al., 2021; Pradhan and Ray, 2021). Gathered data also suggest the tester assessment results, highlighting the percentage of respondents' perceptions regarding question complexity within the market validation model. Notably, 50% of the pilot testers agreed that some questions require a basic level of understanding for effective response. Additionally, 30% of the respondents noted that most questions necessitate a basic understanding, while the remaining 20% indicated that certain questions are too complex to answer. Based on these findings, it is evident that entrepreneurs possess diverse backgrounds and experiences when it comes to establishing SMEs and highlights the need to use easily readable phrases and jargons to better understand the questions and remove potential bias in the results later on. (Schwaninger et al., 2018; Braun et al., 2021; Pradhan and Ray, 2021). Consequently, in order to respond to the assessment tool questions accurately, a foundational

knowledge of the terms utilized within the tool is deemed necessary. Furthermore, the data suggests the importance of configuring the structure of the 32 questions in a manner that ensures easy comprehension, potentially by eliminating overly technical or complex terminology. These insights underscore the significance of catering to the varying levels of familiarity and expertise among entrepreneurs, ensuring that the assessment tool is accessible and understandable to a wider range of users. (Schwaninger et al., 2018; Braun et al., 2021; Pradhan and Ray, 2021). By addressing question complexity and refining the language used, the alternative SBCVM can enhance its usability and effectiveness in facilitating data-driven decision-making for entrepreneurs.

3.3. Development results of the web-based market validation tool

The researchers developed the web-based market validation tool using Eclipse IDE, which supports HTML, CSS, and JavaScript. To ensure wide support across different viewports, the Bootstrap framework was implemented (Aryal, 2019). Figure 9 highlights the development results, particularly the home page, assessment page, and results page. The home page provides general information about the system and important links to references. The assessment page presents 32 questions with rating buttons and a quick view panel for easy navigation, this page requires user inputs that will be used to assess their business ideas across 4 dimensions, The results dashboard page, which allows users to learn and better understand the generated validation results for their business idea. This data visualization dashboard synthesizes the results and allows users to find patterns in the generated data, which they can download as a PDF file to share or study the results offline (Riege et al., 2019). The front-end design for the assessment follows the standard development procedures and bootstrap principles, making it simple and intuitive for users (Aryal, 2019; Shackel, 2009). The assessment page back-end scripts capture the individual value of user inputs and store them in variables for use on the results page, where they are calculated for the data visualization dashboard that contains charts. Additionally, Google analytics was implemented to better track usage and site traffic (Clark et al., 2014). The analytics also helps in the verification of user reports to audit the generated results which are helpful later in the validation phase (Clark et al., 2014; Wiggins, 2007). After the development, testing procedures are done visually to inspect elements and debug the code to improve stability and usability (Shackel, 2009). A detailed revisions and debugging documentation are available on GitHub repository, which can be accessed by the URL provided below.

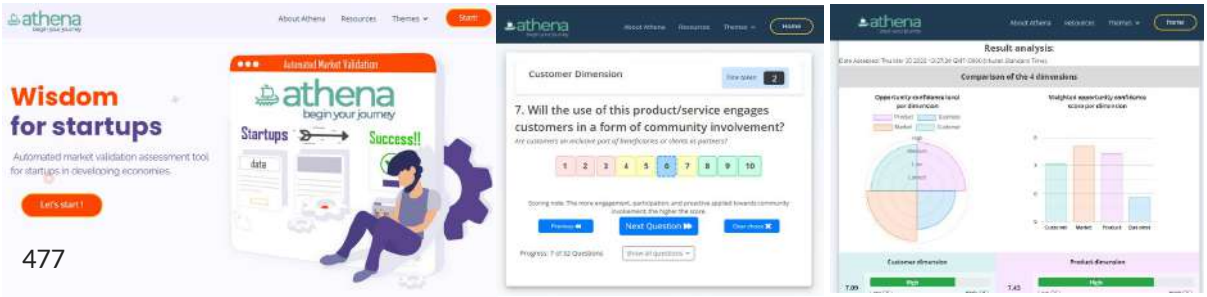
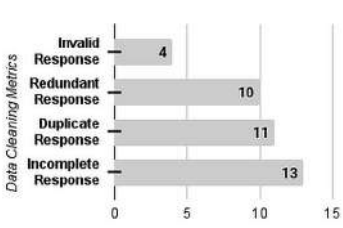
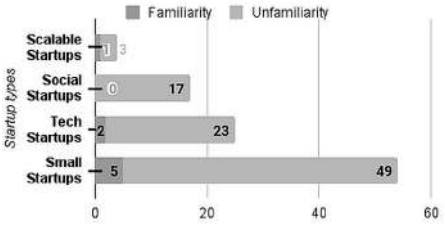


Figure 9: A sample snapshot of (a) Home page; (b) Assessment process page and; (c) Result page of the assessment process. Images retrieved from the Web-based Market Validation Tool (Source: https://marketvalidation.github.io/RRLV2)

3.4. Evaluation results of the web-based market validation tool

The web-based market validation tool was launched and tested across various SME founders. To ensure the quality of the data gathered for the study, the researchers established criteria that must be met for each data to be considered relevant (Taherdoost, 2016; Macakoglu et al., 2022). Out of 138 respondents, 38 were removed. Figure 10.a illustrates the number of responses removed and Figure 10.b shows the total number of SME types that was validated. The first criterion involved the data from other economies, which was deemed irrelevant as it was insufficient and incomparable to the locally gathered data, thus limiting the study to the Philippines. The second criterion was the respondent's email account, which was used to verify their identity and prevent confusion with regard to their user persona. The third criterion required a validation results attachment to validate the feedback and ensure transparency. Lastly, data that were not gathered during the beta testing period were removed. The remaining data were then sorted and profiled to facilitate the data analysis, which will provide insights into the respondents' perspectives on the web-based market validation tool and their SMEs (Chu et al., 2016). These were then flagged as redundant, lacking, duplicate, and invalid submissions respectively. The researchers ultimately accumulated 100 respondents who participated in the study as a basis for the quota sampling of the Web-based Market Validation Tool after removing redundant, and erroneous data as part of the data cleaning process (Gschwend, 2005). The findings indicate a noteworthy trend, with nearly 50% of the total responses stemming from small SMEs. This sheds light on the perception of the significance of small SMEs in emerging markets, a notion that has also been underscored in prior studies (Eldin, 2012; Odina et al., 2022). Additionally, the survey captured respondents' prior experience with similar market validation tools indicated in figure 10.c and denoted by familiarity or unfamiliarity, with 92% indicating no previous usage. Among those who had, only 8% reported having used such tools, with 5% belonging to small, 2% to social, and 1% to scalable SMEs. Notably, none of the tech SMEs founders had prior experience with similar tools, indicating their relative rarity in developing economies like the Philippines. This result implies the importance of designing tools that cater to the unique needs of small SMEs, which comprise a considerable portion of emerging markets (Odina et al., 2022). As such, web-based market validation tools should be tailored to meet the specific requirements and limitations of small SMEs, which often lack the resources and expertise of larger corporations.





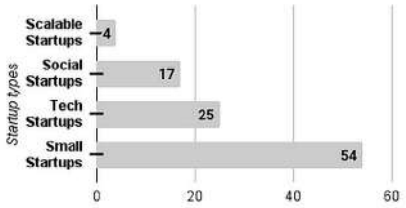


Figure 10. (a) Data cleaning results; (b) 100 respondents SME types and; (c) prior experience with similar market validation tools.

After cleaning and sorting the data, the analysis followed a structured approach using the validation and verification metrics. The evaluation categorized the four SME types to provide a more comprehensive understanding of the results (Gschwend, 2005). The website usability was evaluated using general feedback of SME founders to assess its ease of use and clarity of instructions (Gschwend, 2005; Finstad, 2010). Figures 11a and 11b depict the founders' perception of the website's usability and navigation, as well as their depth of understanding to the assessment questions and guides. These figures are presented according to the SME type respectively. The majority of SME respondents agreed that the web-based market validation system is user-friendly and easy to navigate. Specifically, 50% of the respondents strongly agreed that the website instructions are clear and concise, while 49% of the respondents agreed, with only one respondent from the scalable SME disagreeing. The data collected indicates that the navigation and clarity of the website were perceived as user-friendly and informative by a significant majority of small SMEs respondents and approximately half of the remaining SMEs. These findings have important implications for the development of web-based market validation tools in emerging markets, demonstrating the feasibility of developing a user-friendly and informative web-based market validation tool that can be used by SMEs of different sizes and types. The results also highlight the potential of such tools to help small SMEs overcome market entry barriers and improve their chances of success. Overall, the study provides valuable insights into the development and implementation of web-based market validation tools, which can be used by policymakers, investors, and entrepreneurs to support the growth and success of SMEs in emerging markets.

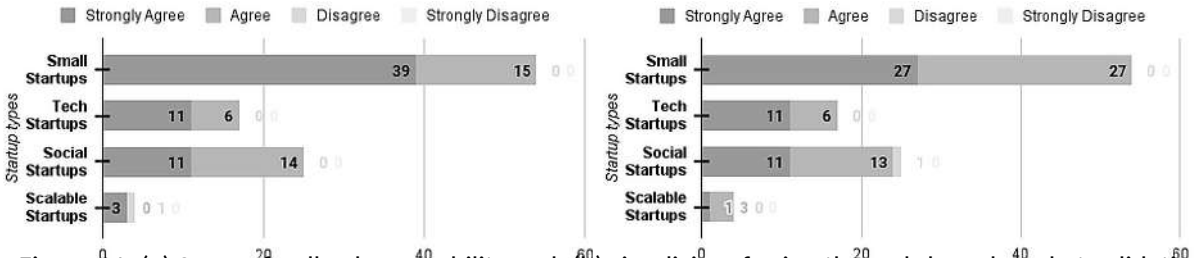


Figure 11. (a) Survey feedback on usability and; (b) simplicity of using the web-based market validation per SME type.

To evaluate the assessment questions in the web application, relevance and accuracy are considered, and complexity is assessed to determine which questions are too basic or too complex (Phadermrod et al., 2019; Gschwend, 2005). The most relevant dimensions are also determined for beta testers. Results shown in figure 12.a indicate that 42% find some questions require basic understanding, 30% find some questions too complex, 24% find most require basic knowledge, and 4% are too complex. This data

suggests that web-based market validation questions require basic knowledge as some jargons are not commonly understood. Evaluating question complexity is crucial to ensure comprehension by most respondents (Phadermrod et al., 2019; Gschwend, 2005; Odina et al., 2022). Figure 12.b depicts the overall respondents' experience during their evaluation that is scaled qualitatively, showing that 42% find it convenient and detail-oriented, while 29% are impressed by its new and unique features. 10% suggest automation improvements, and 12% recommend improving the questions' clarity and simplicity. However, since the website is in its early stage, 7% of respondents expressed difficulty in understanding the questions. Figure 12.c presents compelling evidence that the results of the web-based market validation system are highly valuable for the SME process. The value of the results was assessed by asking respondents to rate them on a scale of 1 to 10. Impressively, the vast majority of respondents rated the results as highly valuable, with a range of 8 to 10. Only 2 respondents gave the lowest score of 5, demonstrating the system's effectiveness and usefulness in aiding SME evaluation (Finstad, 2010; South et al., 2022). Overall, the evaluation of assessment questions in the web application is crucial in determining their relevancy, accuracy, and complexity over the generated results and assessment of their SME. Using a Likert scaling method, researchers validated and verified the impact of the assessment questions to ensure comprehension by most respondents. The tool was tested and validated by 100 respondents, revealing a significant demand for accessible and user-friendly market validation tools particularly for small SMEs in emerging markets like the Philippines, where existing validation methods can be costly and complicated.

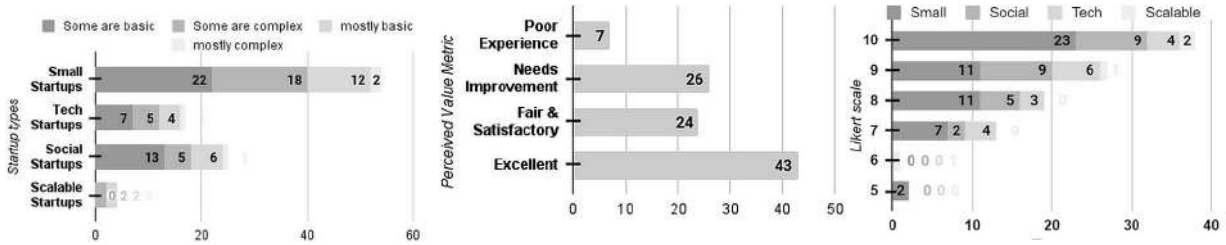


Figure 12. (a) Survey feedback on relevancy; (b) simplified user experience feedback, and; (c) Applicability rating of the generated results for their SME evaluation.

4. CONCLUSIONS AND RECOMMENDATIONS

Existing validation methods can be costly and complicated. One of the main challenges with existing methods is that they may require a significant investment of time and resources, which can be difficult for SMEs in developing economies with limited budgets and experience. Traditional market validation methods like focus groups and in-person interviews can be costly, time-consuming, and have limited reach, hindering SMEs in achieving accelerated growth. Conversely, online market validation methods like online surveys and web applications are more efficient, cost-effective, and have a wider audience reach. Despite the popularity of these online tools, many of them require expensive subscription plans that may limit SMEs' growth in the early stages of their entrepreneurial journey. This research aims to develop a cost-effective and accessible web-based market validation tool for SMEs in developing economies using web development tools such as HTML, CSS and JavaScript, which will be then hosted on a cloud computing server such as GitHub for accessibility, which are then tested and evaluated by launching and testing

across various SME founders through survey and beta testing. To ensure the quality of the data gathered for the study, the researchers established criteria that must be met for each data to be considered relevant. Out of 138 respondents, 38 were removed. After cleaning and sorting the data, the analysis followed a structured approach using the validation and verification metrics. The evaluation categorized the four SME types to provide a more comprehensive understanding of the results. The website usability was evaluated using general feedback of SME founders to assess its ease of use and clarity of instructions. The study reveals that a web-based market validation tool can provide significant benefits to SMEs in developing economies. One of the key advantages of using this tool is its uniqueness, as it was found that the majority of respondents have not previously utilized similar tools. Furthermore, the results demonstrate that the majority of respondents were satisfied with the tool's testing process, suggesting that it can effectively guide SMEs through the market validation process. Another critical benefit is the tool's ability to provide valuable insights to SMEs regarding their product or service offerings.

Through the validation process, SMEs can gain a better understanding of their target market, competition, and overall market demand, allowing them to make informed decisions regarding their business strategy just by using the web-based market validation without investing too much resources in similar alternatives. The researchers recommend specific improvements to the web-based market validation tool. These recommendations include continually updating questions to match current market trends, narrowing questions to specific SME types, improving functionality, evaluating the tool with a more balanced distribution of respondents across different SME types, and benchmarking it to other existing market validation tools. On the other hand, it does have its own weaknesses such as time-intensive process, inaccuracy, and limitation of users since the validation tool is designed to help SMEs that belong to the developing economy with limited business experience and resources. This suggests that the market validation tool has room for improvement that may cater validation techniques for developed economies or may broaden its support for various SME types. Overall, the study underscores the importance and potential of web-based market validation tools for SMEs in developing economies as a means of enhancing their chances of success and driving economic growth.

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ENTERPRISE DEVELOPMENT AND THE SUSTAINABLE DEVELOPMENT GOALS

Creative Collaboration: Developing a Designed Space for MSMEs in Creative Industries in Metro Manila Through Cluster Theory

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ABSTRACT
This study is an exploration to a possible development of a collaborative space according to the needs of Micro, Small, and Medium-scale Enterprises (MSMEs) in the creative industries in Metro Manila. It aligns the community, local government, and institutions through a space that aims to incite social and economical spheres, develop creative collaboration and creative clustering. The proposed facility would provide opportunities for knowledge exchange and networking; for the optimization of linkages among the relevant institutions; and for boosting the positive outlook towards the creative sector. Through the gathering of data from research and potential users, MSMEs in Metro Manila and experts in the field; this study demonstrates the potential of designing a space within CCP Complex, Metro Manila. The space aligns with the goal of this study to nurture and enrich public engagement for the arts across diverse domains in the Philippines. It also promotes public and private activities of related institutional linkages that will blend commerce, creative industry, and culture, thus also according to the Cluster Theory, would bind them through forming a community that responds to productivity needs. Furthermore, the Integral Theory then encourages to accommodate creative processes and behaviors in connection with existing programs for the creative industries in the Philippines through the application of interior design. These approaches can be seen as overarching frameworks, uniting multiple existing paradigms into an interconnected network of approaches that mutually benefit and enhance every part of the developed system.

Keywords: creative industries, interior design, collaboration, clustering .

1. INTRODUCTION

1.1. Background of the Study

The creative industries, which can be defined as a group of entities processing goods and services that make up the creative economy, offer feasible economic opportunities and potential to make positive contributions to society. According to the United Nations (2022), creative industries contribute over 6.1% to gross domestic product (GDP) globally, averaging between 2% and 7% of national GDPs around the world, which estimates annual revenues of over $2 trillion and account for nearly 50 million jobs worldwide.

As mentioned by the creation of the Creative Economy Council of the Philippines (CECP), there are six (6) pillars that make up the creative economy—policy, creative industries, clusters, cities, education, and

tourism (Mercado, 2019). While Filipinos are indeed inherently creative, there is still limited economic growth without the proper boost from the government. Filipinos are often left to individual initiatives (Villegas, 2022), influencing their venture to cultivate respective talents (Nyman, 2015). The most pressing obstacle is the lack overall of policy literacy in the creative industries, therefore, creating a disconnect in governance and development between arts and commerce (Fleming, 2017). According to UNCTAD (2018), the Philippines lags behind in the Asia-Pacific cluster and accounts for only 2% contribution of the regional pile (Alcantara, 2021).

With the Philippines' creative industries composed mainly of Micro, Small, and Medium-Scale Enterprises (MSMEs), opportunity is lost when there is a lack of strategic integration in governmental policies (Nyman, 2015). Since the scope of the creative sector is not properly defined, it also limits researchers and policymakers in estimating economic contribution. This acts as a barrier in formulating effective strategies for possible growth and development.

Indeed, the success of a creative industry is dictated by the individual talent that drives them; it is, however, still affected by its social and cultural environment (Wood & Dovey, 2015). As the creative economy is built upon clusters among the other pillars, it is then necessary to cultivate a space for collaboration of the creative sector to create a clustering opportunity. Creative people are looking for varied high quality experiences, institutions, and places in their community that are open to diversity and distinctness with opportunities for confirming their identity (Przyborowska & Błajet, 2020). By stimulating a symbiotic relationship among the businesses and agencies through a collaborative space, it can support a more sustainable urban development suited to boost the creative economy in Metro Manila.

1.2. Statement of the Problem

1.2.1. Main Problem

There is a general lack of clustering and strategic integration of creative industries and its related linkages into urban development agendas in the Philippines, and yet the creative economy thrives on clusters, co-location, and strong physical networks. According to Fleming (2017), clusters with creative facilities in the Philippines are relatively weak and lack density due to the deficient urban planning and zoning, thus limiting visibility and opportunities for exchange and trade resulting in spillover effects, affecting talent retention and impeding its growth to reach its full potential.

1.2.2. Research Questions

1.2.2.1. How can a centralized location for collaboration of creative enterprises through existing urban structures help the creative industry flourish in Metro Manila?;

1.2.2.2. How can the creative industries, a widespread community found in different areas of Metro Manila, collaborate through creative clustering?; and

1.2.2.3. What are the design strategies based on the four (4) primordial perspectives of Integral Theory to be considered in developing the clustering and collaboration of MSMEs in Metro Manila?

1.2.3. Objectives

1.2.3.1. To identify existing creative enterprises and essential institutional linkages within Metro Manila and bridge them towards the collaborative space.**;**

1.2.3.2. To explore the significance of creative clustering in the improvement of the creative economy and its industries ; and

1.2.3.3. To develop interior design strategies based on the Integral Theory and apply towards the space to build the capacity to accommodate collaboration and clustering.

1.3. Scope and Limitations

The study focuses on the nurturing of creative collaboration through a space for MSMEs registered with Department of Trade and Industry (DTI) within the 16 cities of the National Capital Region (NCR) and other related government agencies, as well as commercial institutions. Furthermore, the enterprises considered in this study are limited to the nine (9) creative industry domains declared in the Republic Act 11904 or “Philippine Creative Industries Development Act”.

As the space is for inclusive use; age, gender, and other demographic profiling are insignificant to the study. Additionally, the creative collaboration is beneficial for Filipinos and their creative outputs and craft, but does not dwell in cultural significance.

2. Review of Related Literature

2.1. Related Literature

2.1.1. Creative Collaboration

Creativity is regarded as one of the most complex of human behaviors wherein personality and social environment can impact on the level of intrinsic motivation of individuals at any time (Amabile, 1997). In John-Steiner’s book titled, “Creative Collaboration” (2006), he construed the notion of "we-ness", pressuring challenges to existing knowledge as collaborative communities are growing in numbers and effectiveness. The very effort to work together and risk the individualistic norm is, in itself, a creative act. Despite its rigorous effort, the shaping of a shared language and risks of honest dialogue, participants discover the benefits of reciprocity which are competence and connection. Collaboration is both cognitive and emotional.

The cognitive aspect of creative collaboration relates to productive interdependence—wherein the intellectual and artistic possibilities of people with different backgrounds, training, and modalities of thought complement each other in joint endeavors. Through collaboration, what problems they fail to address as individuals are able to find new solutions. While creativeness is identified through skills and discipline, it is not limited to the cognitive domain (John-Steiner, 2006).

Emotional experiences are also relevant to the process of collaboration. With a shared vision accompanied by the participants' longing for the security of a caring community, it develops emotional connectedness

and sense of purpose in shared work. The diligent labor of nurturing, shaping, and developing creativeness is strengthened through mutual support (John-Steiner, 2006).

Furthermore, enterprises must transition from individualism to an interconnected approach, acknowledging that their prosperity hinges on the communities they engage with. The mindset of co-production and interdependence acknowledges that the consumer, business, and the environment are interconnected elements within a shared ecosystem, relying on each other for mutual growth. The co-production environment has three important roles: facilitate creative co-production, motivate action, and satisfy personal needs (Abhari and Davidson, 2016).

2.1.2. Micro, Small, and Medium-Scale Enterprises (MSME)

MSME can be defined as any business activity or enterprise engaged in industry, agri-business and/or services with asset size (excluding land) of up to P100 million, and an employment size with less than 200 employees (SEPO, 2012).

As reported by DTI in their latest 2021 statistics, the Philippine Statistics Authority (PSA) recorded a total of 1,080,810 business enterprises operating in the country. Of these, 1,076,279 (99.58%) are MSMEs and only 4,531 (0.42%) are large enterprises. Micro enterprises constitute 90.54% (978,612) of total establishments, followed by small enterprises at 8.63% (93,230) and medium enterprises at 0.41% (4,437). Furthermore, MSMEs account for 25% of the country's total exports revenue, also estimating about 60% of all exporters in the country belong to them.

According to DTI (2021), majority of the MSMEs in the Philippines are in the National Capital Region (NCR) with 198,652 (18.46%) enterprises, followed by Region 4-A (CALABARZON) with 159,377 (14.81%), Region 3 (Central Luzon) with 137,677 (12.79%), Region 7 (Central Visayas) with 77,698 (7.22%), and Region 6 (Western Visayas) with 73,515 (6.83%) in terms of regional division.

2.1.3. Creative Economy

Howkins, the pioneer of the term 'creative economy', described creativity becoming an economic activity when it produces an idea with economic implications or becomes a tradeable product (UNCTAD, 2022). According to the United Nations Conference on Trade and Development (UNCTAD) report in 2010, the creative economy has the potential to grow the country's economy through generating income and developing social inclusion, diversity, and human development by bringing together individuals and entrepreneurs in creative industries.

UNCTAD (2010) highlighted the increase in the demand for creative products, which has been a significant driver of the creative economy's growth. In 2020, the global exports of creative goods represented US$524 million, while world exports of creative services reached US$1.1 trillion (UNCTAD, 2022). The cultural and creative industries provide nearly 30 million jobs worldwide and employ more people aged 15–29 than any other sector (UNESCO, 2018) while future projections by UNCTAD (2021), assumed the creative economy is to reach a global valuation of $985 billion by 2023 and could represent 10% of global GDP before 2030. As of this writing, there are no updated data available yet that is related to this.

Moreover, according to the preliminary data reported by PSA in March 2023, the Philippines' creative economy totaled P1.60 trillion, which is higher than the P1.43 trillion in 2021, making the creative economy 12% higher in value. Moreover, the creative economy in 2022 contributed 7.3% to the country's gross domestic product.

2.1.4. Creative Economy Council of the Philippines

The Creative Economy Council of the Philippines (CECP) is a non-profit organization established in June 2017 by a group of individuals in the creative industry with the shared goal of enhancing the creative economy in the Philippines (FutureLearn, 2022). CECP has presented the Creative Economy Roadmap to the DTI and the Board of Investments (BOI) for further feedback and consideration before it is officially approved and put into action.

2.1.4.1. Creative Economy Road Map

The Philippines' legislators, with CECP, are in the works to develop bills that may unleash significant state support for the creative industries. The 2023 roadmap envisions that the country will top the ASEAN in the size and value of creative industries, creative talent, and international content (DTI, 2019).

During its initial presentation in a press conference, the roadmap will handle measurement for accelerated growth in domestic and international markets; incentivising the development of creative hubs and creative clusters as places for incubation, production, education and research and development; and prioritizing creative education programs to strengthen the country's creative workforce to become the Creative Education Capital of ASEAN, among the others (Department of Trade and Industry, 2019). As of this writing, the roadmap is still being developed and no official document has been released.

2.1.4.2. Malikhaing Pinoy Program

The Malikhaing Pinoy Program, or Creative Philippines Program, is also an initiative that has been implemented by DTI since March 2023 (Talavera, 2023). The program's objective is to utilize the innovative abilities of Filipinos as a significant contributor to the country's economic expansion and recuperation, which will be achieved by establishing a comprehensive and thriving creative environment throughout the Philippines (Creative Industries Summit PH, n.d.). This program aims to follow a framework that describes areas of assessment, constraints, proposed government intervention, and its expected outcomes.

2.1.5. Creative Industries

Creative industries can be defined as a group of entities handling the process of design, production and distribution of goods and services that use creativity and intellectual capital as their primary contribution classified by their role in heritage, art, media, and functional creations (UNCTAD, 2022). Furthermore, the creative industries use creativity and intellectual capital as primary inputs that produce tangible goods and intangible intellectual or artistic services with both creative content and economic value. In order to

revitalize the creative industries, it is vital to align the widespread community, local government, and international initiatives to support and invest towards it (UNPGA, 2021).

2.1.5.1. Republic Act 11904 or the "Philippine Creative Industries Development Act"

Republic Act 11904 was passed into law on July 27, 2022, and mandates the promotion and development of Philippine creative industries by protecting and strengthening the rights and capacities of creative firms, artists, indigenous cultural communities, and other stakeholders (Austria, 2022). As defined in this Act, creative industries are trades involving persons that produce cultural, artistic, and innovative goods and services based on creativity, skill, and talent to create wealth and livelihood through intellectual property (Congress of the Philippines, 2022).

Further stated in this Act's Chapter 4: Support for the Creative Industries, that the Council shall provide co-working spaces and other similar facilities and hardware that may be utilized by multiple creative industry stakeholders towards the creation, cultivation, and promotion of their goods or services. The service facilities refer to machinery, equipment, tools, systems, accessories and other auxiliary items, skills, and knowledge that are being provided by DTI. This states the recognition of the law regarding the necessity of space and its following material needs of the users. The plan, however, is not yet available officially as it must be submitted to the President of the Philippines for approval within one (1) year after the inauguration of this Act.

2.1.5.2. Classifications of the Creative Industries

As defined in the RA 11904, the following creative industry domains are:

- Audiovisual Media Domain - refers to audio and audiovisual content that are distributed through broadcast media.
- Digital Interactive Media Domain - refers to digital software programs and mobile applications operated on interactive digital devices.
- Creative Services Domain - refers to demand-driven commercial creative service for commissioning clients.
- Design Domain - refers to the process of planning and manufacturing spaces and systems at the heart of which is creating solutions that address a need or a problem.
- Publishing and Printed Media Domain - refers to the creation, publication and commercial literature in traditional print and digital format.
- Performing Arts Domain - refers to all activities involved in the training of performances and such other art forms.
- Visual Arts Domain - refers to all activities that are primarily visual in nature.

- Traditional Cultural Expressions Domain - refers to products and practices of traditional Filipino culture and heritage, culinary practices, cultural festivals, and celebrations.
- Cultural Sites Domain - refers to the physical human-made locations and monuments that are of vital significance to the objective of promoting Philippine culture.

2.1.5.3. Creative Industries in the Philippines

The Philippines has the largest volume of creative services exports in the ASEAN where the country exported $3.2 billion worth in 2018, followed by Malaysia with $1.4 billion, Singapore with $686 million, Indonesia with $263 million, and Thailand $37 million (UNCTAD, 2018). However, in manufactured exports of creative products, the country did poorly with only $915 million compared to $10.9 billion of Singapore, $6.5 billion of Thailand, $6.1 billion of Malaysia, and $5.1 billion of Indonesia.

This inferior performance is mainly due to the country's tendency to rely on import-substitution industrial strategy, according to Villegas (2022). Moreover, as stated by Fleming (2017), another major hindrance in enhancing the country's creative industries is the limited data available as there are no policies to collect statistical information about them to adequately analyze its current state and further assist in its development. Indeed the Philippines has untapped potential, and has an emerging domestic market (Fleming, 2017). A set of strategic, structural and regulatory elements need to be introduced to overcome barriers to business development and trade, reduce the effects of piracy, and build a culture of entrepreneurialism in the sector (Fleming, 2017) to contribute substantially to the economy.

2.1.6. Creative Clustering

Creative clustering can be seen as a socio-spatial assemblage of people, buildings, and activities without any necessary center, boundary or scale (Dovey & Wood, 2014) where people and spatial context are mutually constituted (DeLanda, 2006).

2.1.6.1. Effects of Clustering

Marshall (1890) argued that the economic advantages of clustering included a ready supply of labor, shorter distances, faster production supply chain, and the collective attraction of multiple competitors delivering to a large customer base.

According to Dovey and Wood (2014), there are two (2) different agglomerative effects of physical clustering — density and network effects. Density allows the shortening of physical distances and increases the ease of face-to-face meetings, and the frequency of expedient encounters in public space. The economic value of it comes from both the reduction of distance and from the spillover of knowledge created. Furthermore, the network effect relates to the way the value of each node in a network increases with the number of nodes in the network.

2.1.6.2. Parameters of a Cluster

To identify if the cluster is walkable, maps are generally centered on a particular site with a proximate zone of about 500 metres of every other attraction, framing the multiplicity of potential walkable flows within them. Dovey and Wood (2014) found that within the sites that contain the most intense clusters of creative activity a markedly higher diversity of built environment variables.

Storper and Venables (2004) further claimed that in settings of incomplete information and evolving conditions of content that cannot be standardized, in-person interactions become especially valuable. And for such an encounter to be in-person, Dovey and Wood (2014) indicated that a cluster must be dense enough to contain everyday amenities within walkable distances.

Unfortunately, achieving a set-up of clustering in the Philippines is inherently difficult due to lack of urban planning or zoning (British Council, 2017). Strategic development and places where creative densities, high-performing innovation ecosystems, diverse cultural life, and excellent public spaces have better opportunities to nurture significant cluster development can be applied to Metro Manila. This may then include activities such as local clusters that provide work and activity spaces led by the creative industries (Fleming, 2017).

2.2. Theoretical Framework

2.2.1. Michael Porter's Cluster Theory

Michael Porter described clusters in his excerpt, Clusters and the New Economics of Competition in 1998, as interconnected industries, suppliers of specialized inputs like components and machinery, specialized infrastructure providers, and various institutions such as universities, standards agencies, think tanks, vocational training providers, and trade associations who offer specialized support and resources. The diamond model (Fig. 1) shows multiple dimensions of microeconomic competitiveness and understanding how they interact with each other.

The model has four broad attributes that shape the environment in which local firms compete that promote or impede the creation of competitive advantage (Porter, 1990), and locations can also improve competitiveness. The attributes are Firm Strategy, Structure and Rivalry, the rules and incentives that encourage investment and productivity; Demand Conditions, the sophisticated and demanding local needs of customers; Factor Conditions, the access to high quality business inputs for its improvement; and Related and Supporting Industries, the availability of suppliers and related and supporting industries from local or international.

Meanwhile, the two (2) external factors, Chance and Government, more often depend on the situation and locale. Chance is an event that is mostly outside the power of firms (and government) like wars or foreign jurisdictions, while the Government is able to improve or detract from the national advantage through policies (Rakelmann, 2009), because they shape the determinants for competing.

2.2.2. Ken Wilber's Integral Theory

Ken Wilber's All Quadrants All Levels (AQAL) model (Fig. 2) is the basic framework of Integral Theory which suggests that all human knowledge and experience emerges within four primordial perspectives. As Wilber (2008) explained that Integral Theory provides a comprehensive, inclusive, and non-marginalizing framework, acting as a meta-paradigm that integrates various separate paradigms into an interconnected network of mutually enriching approaches.

Emerging from the Integral Theory is its application towards architecture. Hackett & Weigley (2017) claimed that it is not a new concept to the profession as it can even be traced back to early civilizations when built spaces were viewed as a whole. In applying the Integral Theory towards architecture, many remain silent on the role of individual experience—its functionality and interaction—therefore missing the potential of creating spaces for human development (Hackett & Weigley, 2017). Hence, the creation of an AQAL model through Integral Theory (Fig. 3) that considers the invisible/symbolic context of buildings, building structure, the visible context/function of the building, and finally, the human experience.

3. CONCEPTUAL FRAMEWORK

The gathered data through research, interviews, and surveys were the main sources of the developed strategies for the proposed collaborative space. Through the gathered data from MSMEs and professionals through interviews and surveys, their experiences in relation to the social and economic aspects were translated into use through the theories (Fig. 4). The Cluster Theory identifies the necessary surrounding environment that fits the needs of the creative industries in clustering and creative collaboration. Likewise, the human interaction of the creative industries with each other in regards to the designed built environment is through the Integral Theory. The control variables such as the national governmental agencies (NGAs), LGUs, and other necessary institutional linkages were considered due to their relation to the MSMEs, and their policies and programs were also used as guides and basis of what the collaborative space should be.

To revitalize the creative industries, it is vital to align the widespread community, local government, and international initiatives to support and invest towards it (UNPGA, 2021) through proposing a space for creative collaboration through clustering of its users and the surrounding creative community.

4. METHODOLOGY

4.1. Survey

The key participants in the study were MSMEs in Metro Manila who belong within the creative industries. The domains considered for the survey only belong to Audiovisual Media, Creative Services, Design, Publishing and Printed Media, and Visual Arts. Excluded from consideration are Digital Interactive Media and Performing Arts, since these consist of freelancers and creative individuals, and would not be in compliance with the requirements. Furthermore, the Traditional Cultural Expressions Domain overlaps with other domains like Creative Services, Design, and Visual Arts, and may lead to duplicate respondents. Lastly, Cultural Sites Domain involves physical human-made historical locations, making it ineligible for possible respondents.

The initial data was gathered through an online survey disseminated to MSMEs in Metro Manila through Google Forms. The respondents fit three (3) specific requirements: their location is in Metro Manila; they only have 1 to 199 employees with their business name registered in DTI as a sole-proprietorship; and they belong to the only considered domains. For validation of given data, the business names were checked in DTI's Business Name Registration System website.

This online survey was disseminated through social media online platforms like Facebook, Messenger, and Instagram. The primary goal of the survey was to obtain quantitative data that can be analyzed statistically to identify patterns, trends, and relationships among variables through closed-ended questions.

Snowball sampling, a non-probability sampling technique, was used since the target population is difficult to identify or reach. The researchers asked the tapped respondents to provide the survey to other MSMEs who also met the same criteria. The target number of MSMEs to answer the survey was at least fifty (50) participants, with ten (10) per creative industry domain considered.

4.2. Interviews

The interview was used to obtain qualitative data by asking questions and engaging in a conversation with the participants and the economic specialists. The primary goal of interviews was to gather in-depth information about the interviewee's experiences, opinions, or behaviors.

After gathering information from the survey, the researchers selected five (5) participants based on their answers regarding their experiences that were of interest to the study, and were subject to a semi-structured interview to confirm factors to be maintained and attain preemptive solutions to their experiences. With purposive sampling, the researcher deliberately chose participants who were likely to provide relevant and meaningful information to the study.

Furthermore, specialists were also interviewed to affirm the economic facets as well as considerations to be expected of the study, therefore fulfilling the qualitative needs of the study. To further immerse the researchers towards the study, it was essential to understand the vastness of the study from the lenses of professionals in the field. The data gathered from the specialists focused on information regarding the

MSMEs in Metro Manila; the gaps, hindrances, and reasons for the experiences of MSMEs in the creative industries.

5. PRESENTATION OF DATA

5.1. Study Findings

5.1.1. Summary of MSMEs' Online Responses

The online survey for MSMEs in the creative industries in cities from Metro Manila was conducted through Google Forms. The survey included three (3) sections to properly segregate the data given by the respondents: MSMEs' basic information; necessary facilities and equipment for their businesses; and their opinion regarding a possible collaborative space.

The first section's responses showed that out of the 50 participants, 25 belonged to the Micro scale, 24 in the Small scale, and only 1 in Medium scale, wherein 28% are registered in the city of Manila, followed by 20% from Quezon City, 10% from Mandaluyong, 8% from Paranaque, Pasay, and Muntinlupa, 6% from Las Piñas, 4% from Pasig and Makati, and only 2% from Taguig and Navotas.

The second section focused on identifying the facilities and equipment necessary for each respondent. The facilities indicated were Production Room, Art Studio, Performance Studio, Audio and Audiovisual Room, Computer Room, Planning Room, Library, Conference Room, Offices, and Stock Rooms. All facilities were agreed upon by the participating domains except Art and Performance Studios. As for the equipment, the choices offered were Computers, Art Materials, Camera, Printing, Carpentry, Recording, and Musical equipment. The results varied greatly among the different Domains, see Table 1 at the end of the manuscript for the detailed visualization of answers.

The third section asked if they were comfortable with their current location where 26 respondents answered yes, while 24 were not. Lastly, the survey asked for their opinion on participating in a possible collaborative space, where 37 respondents answered 'Yes', seven (7) chose 'No', and six (6) 'Maybe'.

5.1.2. Responses of MSMEs Interviewees

Five (5) respondents from the survey, which were chosen based on their answers, agreed to become interviewees for the second part of the data gathering process. To further understand the situations of MSMEs in terms of collaboration, they were asked about their experiences with collaboration, its importance, its effects, their preference with their tangible environment, and their vision towards the collaborative space.

Considering that they all have involved themselves with other creative enterprises in any way, the question on why collaboration is important was assessed whether or not the participants see beyond the economic aspect of doing business. This allowed the researchers to see the necessity, or the lack thereof, of creating a collaborative space that mostly anchors on the social and cognitive aspect of business.

The first question focused on the importance for collaboration within creative industries. The five (5) respondents shared different experiences and the researchers identified multiple *keywords* from their responses. First is Consumer Connection, as collaboration mainly offers an opportunity for exposure to a bigger market. Another is Resources, as a respondent highlighted that it is another way to increase their sales. Furthermore, it is also a chance to help other businesses and build Business Connections as they would let other shops accommodate their customers when they cannot anymore entertain them. Lastly, it is also an Emotional Experience since it is an opportunity to interact with their fellow MSMEs and build good relationships with them.

Then the next question was about the experiences in collaborating with other creative enterprises to help understand how the space could possibly affect them. Ease of transactions is one of the main benefits of clustering, since proximity of location is an important Tangible Asset and it also increases Business Connections. Furthermore, it would also be fairly easier to canvass multiple suppliers to manage Resources properly. Lastly, Consumer Connection was again a recurring theme as the respondents shared increased opportunity to tap into other markets during their collaborations.

The next question was asked to assess the effects and results of their previous collaborations. This allows the participants to share the good or bad effects of their experiences of collaborating with other entities in the creative industries, therefore, immersing in the relationships formed by the entities with each other. Notably, the respondents shared that the experience gave them a chance for self-assessment and to explore a Cognitive Experience in learning through social interaction. Moreover, they also expressed gratitude and noted good experiences from the collaborations, citing an Emotional Experience. Overall, the effects of collaboration have only been positive for all of them.

In the next two (2) questions, the researchers aimed to identify the physical needs, particularly interior applications, that the respondents prefer in their current location. Therefore, use it as reference to what can be added within the collaborative space. On the other hand, the participants who expressed distaste with their current situation can also be used on what to prevent. The responses were varied as others expressed a sentimental value or a beneficial Emotional Experience within the space, and a satisfactory versatile location to highlight their Tangible Asset. On the other hand, others shared about an uncomfortable environment due to limited space, which created a negative Emotional Experience, and complained about a difficult to access location.

After expressing reactions to their present situations, the researchers proposed to them a space that could possibly aid their concerns in business, with collaboration and clustering at the top main priority. The question asked the opinion of respondents referring to a conceptual collaborative space for the creative industries in Metro Manila. The respondents' answers mostly revolved around having a space where communication and learning from others as well - Emotional and Cognitive Experience - is the most beneficial function of the space. Furthermore, some saw this as a form of opportunity for the betterment of their businesses, which includes opportunity to expand their vision as an enterprise, an adequate amount of work space, and its reachability through transportation - Consumer Connection, Resources, and Tangible Assets.

5.1.3. Responses of Economic Specialists

With a different approach from the interview with MSMEs, the interviews with two (2) economic specialists tackled the more technical aspects concerning the laws and clustering of the creative industries.

The first question focused on what actions were implemented by the government towards the creative industries. The specialists mostly cited Governmental Linkages like DOST, DTI, DEPED, NEDA, DOT, DILG, CHED, NCCA, IPOPHL, and LGUs who facilitate laws, namely the Republic Act 11904, that provide further connection with institutions, and assures protection and support for the different needs of MSMEs. As mentioned by one of the specialists, the creative industries now are involved with the cause, however, as added by the other, it is still very generalized and will need to take some time to figure out the details. Other than the law, they also mentioned supporting institutional linkages with various functions to the sector.

The next question targeted the reasons for the need of institutional action to pinpoint the far wider problems experienced within the creative industries that may possibly affect the effectiveness or necessity of collaboration. They indicated that the combination of the International Industries that thrive within our country due to Filipinos' inclination towards imported and limiting patronage to locally made products. Moreover, the delayed progression of law for the creative industries in the Philippines in comparison to other countries, as well as problems in intellectual property protection, highlights the deficiency of Cognitive Experiences. Lastly, there is a lack of available resources like educational and financial support that MSMEs require to prosper.

In the last question, the specialists were asked about the necessity of clustering for the creative industries. Both mentioned that clustering has been recognized by the government as an important factor of the industries through the "One Town, One Product" initiative of DTI. Moreover, they also have indicated that the clustering is strongest in the city of Manila since it is the capital city of the country. Tangible Assets and Resources, like infrastructures, institutions, and talents mostly centralize within this area as part of history where architecture, arts, and design were given focus and facilitates the conception of multiple, still-standing structures for the arts like the Metropolitan Theater, Cultural Center of the Philippines, Folk Arts Center, PICC, are close in proximity with each other.

5.2. Site Findings

5.2.1. Site Location

As Dovey and Wood (2015) claimed, creative industries are mostly located in districts with high levels of social, functional, and formal diversity as well as a vibrant urban setting that normalizes face-to-face encounters with creative people. Since established creative landmarks and majority of MSMEs in the Philippines are in Metro Manila, it poses the most potential to house a collaborative space with exhibition, sales, and office space for creative entrepreneurs and also act as the central point of a wider network (Newbigin, 2021).

The chosen site for the conceptual development of the collaborative space is in the Seascape Village, Atang Dela Rama Street corner Zoilo Hilario Street, CCP Complex, Pasay City, Metro Manila, Philippines. The commercial space houses restaurants, stores, and entertainment spaces wherein the infamous Manila Bay can be viewed. It is located within the CCP Complex and 5-kilometer distance to a few of Manila's key landmarks for arts and commerce such as the Cultural Center of the Philippines, Philippine International Convention Center, and World Trade Center.

Since the City of Manila has the most number of registered MSMEs, and CCP has a mandate to transform the CCP Complex into an internationally renowned facility for arts and culture (Cultural Center of the Philippines, n.d.), it aligns with the objective to nurture and enrich public engagement with and admiration for the unique arts of the Philippines across diverse domains and promote the public and private activities (Cultural Center of the Philippines, n.d.). Moreover, as part of its Function, Services, and Programs indicated in their Operations Manual document, it claims that the CCP Complex will blend commerce, creative industry, and culture, binding them through forming a community—turning it into an urban ecological oasis that will cater to Filipinos from all walks of life.

6. ANALYSIS AND DISCUSSION

6.1. Analysis of Data

The two (2) theories used in this study are the Cluster Theory by Michael Porter and the Integral Theory in relation to the Building by Hackett & Weigley. Cluster Theory was for identifying multiple dimensions of the economy and understanding how they interact with each other, while the four (4) perspectives of the Integral Theory was the basis on what necessary aspects to consider in designing the collaborative space.

From the responses of both sets of respondents, 'Resources' and 'Tangible Assets' were derived, which pertains to inputs necessary for businesses to operate that directly relates to the attribute 'Factor Conditions' in the Cluster Theory. Despite the abundance of Filipinos who are inherently creative, the talents are not fully utilized unless the non-financial barriers and financial barriers which cause constraints to MSMEs (SEPO, 2012) are realized and given solutions. Moreover, it is worth emphasizing that the co-creation environment requires a place as the means for co-production (Abhari and Davidson, 2016). However, MSMEs could seldom afford research and development, much more the trainings; leading them to consider risky strategies. It is then that creative spaces provide support to buttress the inherent structural weaknesses of the creative economy (Gill, et.al, 2019).

As for the 'Firm Strategy, Structure, and Rivalry' of the Cluster Theory, which generally means the developed rules and incentives that encourage productivity, 'International Industries' and 'Governmental Linkages' were then obtained. One of the problems mentioned in the interviews was that despite the country producing its own products, Filipinos still entertain imports instead of locally made products. Moreover, there is also leniency in the country's laws regulating them. These affect the patronage of local MSMEs as the demand for their products is affected by external factors, and not entirely due to their performance, talent, and capabilities. To counteract, RA 11904 was passed in 2022 for the creative industries in the Philippines, which aims to develop and sustain collaborations with and among

government agencies, creative entities, organizations, and associations, locally and overseas, whether from the public or private sector, and coordinate with appropriate government agencies for overseas cooperative collaborations.

The attribute 'Demand Conditions' of the Cluster Theory, which basically refers to the demand of the consumers of the market, was supported by 'Business Connection' and 'Consumer Connection'. To understand those demands, communication and collaboration is necessary for it to be generated into something shareable—may it be goods, services, or ideas. As UNCTAD and UNDP (2010) highlighted, the increase in the demand for creative products has been a significant driver of the creative economy's growth. Furthermore, Demand Conditions are the concept of interdependence where it acknowledges that the consumer, business, and the environment are interconnected elements relying on one another for mutual growth and prosperity (Rocca, 2021). According to Abhari and Davidson (2016), the enterprises' communal motivations in performing creative co-creation increases, becoming an inherent part of any co-production network through effective communication to exchange creative ideas to instigate more demand.

Last is 'Related and Supporting Industries' of the Cluster Theory, which refers to entities involved within the creative industries that help boost an enterprise through connection and collaboration. Collaboration's manifestations can be charged with both 'Cognitive Experience' or 'Emotional Experience' (John-Steiner, 2000). Emotional Experience is that collaboration, as experienced by the participants, can at times admittedly be negative but is still mostly positive depending on their situations. On the other hand, the cognitive experience is when thinking, condensed in the cognitive process, requires a place for translation into the external to be generated into something shareable, may it be goods, services, or ideas —that can be expressed through communicative forms of dialogue. Hence, the conceptualization of a collaborative space for MSMEs and its linkages are necessary to promote these experiences.

As expressed by Błajet & Przyborowska (2020), the role of place in creative activity is indicated by Wilber's (2007) Integral Theory to be essential to determine these cognitive and emotional processes and behaviors. Therefore, the four (4) perspectives in Integral Theory are to be fulfilled based on the data analysis through the following:

- 'Human Experience', where the space should be able to accommodate both emotional and cognitive needs of the users in order to successfully collaborate, provide necessary equipment to support creative expression designed with collaborative functions and creativity-inducing colors;
- 'Building Structure' responds to the tangible assets and resources of the users that have well-equipped spaces that considers their sensory experiences;
- 'Invisible Context', or the symbolism and culture, should encourage a culture of continuous learning by cultivating a strong sense of community and shared purpose among the members by fostering an inclusive and supportive environment;
- and 'Visible Context', or the function and use of the space, should be focused on collaboration of different entities to develop effective organizational structures and governance mechanisms by working together with external public and private institutions.

6.2. Design Development

6.2.1. Activity Systems

The activity system (Fig. 5) of the collaborative space originates from the main goal of the study for it to incite creative collaboration and clustering of MSMEs in the creative industries in Metro Manila. This goal separates into subgoals namely, to provide MSMEs the facilities for collaboration, and to develop their institutional linkages.

The next level indicates the interventions to be undertaken. The five (5) mentioned interventions were based on the Creative Philippines Program that is currently being implemented by DTI in line with the creative industries to support economic growth and support of the Philippines.

The fourth level shows the facilities which is the place of the said interventions. The facilities are based on the survey participants' preference in the facilities needed in order to operate. This is then further segregated into zones that are applied into the layout of the collaborative space.

6.2.2. Design Concept

"Pi.Co: Pinoy Collaboration"

As the goal of the space is to introduce *collaboration* with fellow Filipinos or *Pinoys* through interior design, the main concept is titled "Pinoy Collaboration" or "Pi.Co". It is a word play that phonetically resonates with the Filipino traditional game, *Piko*, or hopscotch, wherein the players work together to draw a variety of shapes using chalks on the ground which will serve as their paths for the game they seek to win. Similarly, in this study, MSMEs are to form their paths to take together with the creative community through the collaborative space.

The shapes drawn in the game of Piko, like squares, rectangles, and circles were also applied into the space. These were also distinctly observed in the works of Philippine National Artist Arturo Luz, with his use of geometric shapes and colors. Some of his works reflect the same characteristics as hopscotch (Fig. 6).

The main ideas that have been picked up from the inspiration images revolve around textures and colors, paintings, basic shapes, and heavy, bold yet soft curves (Fig. 7). The choice of shapes in this space serves both form and function. Squares and rectangles offer stability and formality, creating an organized and secure atmosphere. In contrast, circular and rounded shapes introduce softness, inclusivity, and fluidity, balancing the rigidity of squares and rectangles to enhance visual flow (Arco, 2023). Additionally, the color palette consists of calming grays and creams complemented by vibrant yellow, green, red, and blue tones, known for sparking creativity (Clark, 2020) (Fig. 8). Yellow fosters optimism and innovation, green connects with nature to reduce stress, red enhances detail-oriented tasks like memory retrieval, while blue boosts creative thinking. (University of British Columbia, 2009). Lastly, the mood for the design of the space is ideally warm and welcoming, while inspired from the Tropical Brutalism and Mid-Century style of design which matches the location's surrounding landmarks like PICC, CCP, etc. (Fig. 9).

6.2.3. Design Strategies

As seen in the Activity System, the Pi.Co Collaborative Space is divided into four (4) main zones: Public Zone, Library Zone, Creative Zone, and Technology Zone.

The Public Zone (Fig. 10) is mainly intended for the general public, which connected the Public Zone Lobby (Fig. 11) to the Pi.Co Gift Shop, Exhibit Hall, Library, Cafe, and the outdoor garden. The Pi.Co Gift Shop (Fig. 12) is a store that carries products of the MSMEs in the Collaborative Space, while the Exhibit Hall (Fig. 13) is a multipurpose area that can be used for different types of events and exhibitions of works, and the Cafe (Fig. 14), which will also be run by MSMEs, is to provide food and beverages.

Furthermore, the Library Zone (Fig. 15) is for creative learning in the forms of both reading or practice in different types of settings. It has a Carpentry Room (Fig. 16) for those involved in woodworks, a Library (Fig. 17) for both the MSMEs and for public use, and an Indoor Garden (Fig. 18) that is connected to the Library to allow the users to enjoy the outdoors.

Meanwhile the Creative Zone (Fig. 19) is focused on developing arts and design skills, with spaces adjacent based on related business outputs. The Creative Zone Lounge (Fig. 21) may be transformed into an events place along with the main lobby. MSMEs have the opportunity to contribute to the space's design by offering their products for sale or loan, with fair compensation. The offices are also placed here to be secluded from other participants of the space (Fig. 22, 23, 24), as well as the Conference Room (Fig. 25) and Planning Room (Fig. 26). The Art Gallery Room (Fig. 27) is where artists can do traditional art pieces and may be displayed along the walls. The storage is hidden behind cabinet doors that appear as walls for a cleaner look. The Design Room (Fig. 28) is for multiple art projects that require design tools and equipment. The Photo Studio (Fig. 29) is for photography and video types of practices. Lastly, the Material Library (Fig. 30) is where artists can source and discover different types of materials for their projects. It is directly connected to the Design Room for easier access of materials for MSMEs' projects.

Finally, the Technology Zone (Fig. 31) is for developing skills that mainly use modern technology and equipment. It has a Lounge (Fig. 32) to serve as a resting area with a variety of seating styles, a Digital Hub (Fig. 33) consists of computers, printing stations, and cutting areas, and Recording Booths (Fig. 34) that consist of 3 separate booths with various musical instruments.

7. CONCLUSION AND RECOMMENDATIONS

7.1. Conclusion

This study aimed to investigate the lack of clustering and strategic integration of creative industries and its related linkages into urban development agendas in the Philippines with the objective of identifying creative enterprises and linkages within Metro Manila and bridge them towards the collaborative space, understanding the significance of creative clustering in the improvement of the creative economy and its industries, and to develop interior design strategies based on the theories and apply towards the space to build the capacity to accommodate collaboration and clustering. Through the application of Cluster and Integral Theories, the clustering and collaboration necessary for the development of the creative

industries in which the Philippines currently lacks can be achieved by applying them within the space while also considering its surrounding environment.

A location with all the necessary parts of society needed to form a cluster that is competitive and productive within its 500-meter radius was determined. A possible location is in Seascape Village Bay Market, CCP Complex, Pasay, Manila which is adjacent to diverse facilities encompassing commercial, creative, and institutional. The CCP Complex aligns with the goal of this study as the complex's objective aims to enrich public engagement with an admiration for the unique arts across diverse domains and promote activities of related institutional linkages that will blend commerce, creative industry, and culture, binding them through forming a community—turning it into an urban ecological oasis for Filipino creatives. Metro Manila was chosen for its great clustering capabilities, making it highly likely that it may thrive with its modernity, advanced infrastructures, government-owned venues, academic institutions, but most importantly, the abundance of its talents.

Indeed, collaboration is viewed as an integral part of improving the creative industries, and to aid the necessity of having a collaborative space that opens opportunities to connect with not only other members of the creative industries, but also to the consumer market. More than its economical aspect, the collaborative space further deepens its essence to society as collaboration is a process involving emotional and cognitive experiences, which overall affects the users' performance and capability to collaborate. Since thinking is condensed in the cognitive process, it requires a place for translation into the external through emotionally regulating communicative spaces.

The facilities and activity systems within the collaborative space were determined based on the existing creative industries program implemented by DTI, the Creative Philippines Program, to align the objectives of DTI towards the study.

7.2. Recommendations

Given that the study focused only on the creative industries in Metro Manila, it is recommended to explore other possible areas in the Philippines with high creative concentration and clustering capabilities, with the consideration of having a more cultural edge to introduce further the Philippine culture. Additionally, collaboration is a permeable process of networking, and should be explored further and not be limited by only the mentioned institutional linkages and MSMEs, but eventually diversifying towards the other members of the creative community. One of which are the individual freelancers and creatives who are in the look to form further connections.

Further recommendation is for researchers to immerse themselves with the production chain of different types of MSMEs and their different types of products to assess all the needed equipment, furniture, or space that encompasses cultural, ancestral, and modern technology or process.

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Profiling of Small and Medium Enterprises in the Northern Municipalities of Eastern Samar Province

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ABSTRACT

This study investigated into the relationship between the profile of the SME operators/owners and their extent of business management practices as well as the business profile and performance of these SMEs that are located in the northern part of Eastern Samar province, particularly, Taft, Can-avid, Dolores, Oras, and San Policarpo. A total of 104 SME operators gave their consent to participate in this study. Data were collected using a self-developed survey questionnaire, part of which was adopted from a previous study. The study revealed that the majority of these SME operators/owners are married, in their forties, and were able to attend and graduate in college studies. As to the SMEs' business performance, most of these operators reported conducting daily assessment of their income from sales rather than weekly and monthly and; the average daily income was reported at Php 7,453.85, the weekly average income at Php 30,555.56, while the average monthly income was reported at an average of Php 129,140.83; while it took months for almost two-thirds of these SMEs to break even their business performance. Moreover, the study found out significant relationship between variables as follows: between the age of the SME operators and their extent of supply management and sales management practices, between such business-related profiles as the type of business, number of years of business operations, initial capital for the business, and the presence of helpers in the business operations and their extent of practice of some business management activities; as well as the extent of business management practices and income from the business. Recommendations were proposed to assist
the successful business performance of these SMEs.

Keywords: business management practices, business performance, profiles of SMEs, Eastern Samar, SMEs

1. INTRODUCTION

In both developed and developing nations, small and medium-sized enterprises (SMEs) play a vital role in driving economic growth. Rohra and Panhwar (2009) underscore the significance of the SME sector in developed countries, highlighting its unique contribution to employment creation, income generation, and overall improvement in living standards. This trend is mirrored in the Philippines, as reported by Miranda and Miranda (2018), where SMEs account for a substantial portion of employment and value added in production. Particularly in rural areas, SMEs have the potential to significantly impact the lives of residents by providing employment opportunities and boosting income levels.

In rural communities, SMEs serve as engines of economic development, offering employment and income-generating avenues that enable individuals to access better living conditions, including improved housing,

water supply, and infrastructure. This transformative impact is most evident when SMEs receive adequate support and resources, creating an environment conducive to business growth and prosperity (Miranda, 2018).

Chen (2002) further elaborates on the multifaceted role of SMEs, emphasizing their ability to address regional disparities by fostering the growth of new industries in rural areas and stimulating local labor markets. By being labor-intensive, SMEs contribute to more balanced economic growth and equitable income distribution, thus mitigating regional inequalities.

Recognizing the importance of SMEs in regional development, the BSBA Faculty of Eastern Samar State University Can-avid is spearheading a research project focusing on SMEs in selected municipalities of Eastern Samar province. The main problem statement motivating this research endeavor lies in the imperative need to understand the current status, opportunities, and challenges faced by SMEs in the northern municipalities of Eastern Samar. This understanding is critical for providing necessary assistance and support to foster the growth and development of these enterprises.

Through a comprehensive profiling survey, the research aims to unravel the socio-demographic characteristics of SME operators, assess their management practices, and evaluate business performance. The ultimate goal is to devise an extension program aimed at enhancing entrepreneurial skills among SME operators, thereby fostering their competitiveness and ability to meet market demands effectively.

The selection of Taft, Can-avid, Dolores, Oras, and San Policarpo for the research project is strategic. These municipalities boast a significant concentration of SMEs, facilitating accessibility for research purposes. Additionally, the proximity of the researchers to these areas streamlines interactions with SME operators, ensuring effective data collection and analysis. Moreover, given the challenges posed by the ongoing COVID-19 pandemic, focusing on nearby municipalities minimizes travel distances and adheres to health protocols, thereby ensuring the safety of all involved in the research endeavor.

1.1. Background of the Study

1.2. Objectives of the Study

The study focused on profiling the SMEs operating in the northern municipalities of Eastern Samar province with the following specific objectives:

1. To describe the personal profile of the SME operators/owners in terms of:
   1.1 Age
   1.2 Civil Status
   1.3 Highest Educational Attainment
2. To assess the business operations profile of the SMEs in terms of;
   2.1 Type of the business
   2.2 Years of operating the business
   2.3 Initial operating capital
   2.4 Number of persons involved in its operational activities

2.5 Supporting/Augmenting capital, and
2.6 Ownership of equipment used in business;

3. To identify the extent of business management practices observed by the SME operators/owners in the following aspects:
   3.1 Supply Management,
   3.2 Sales Management,
   3.3 Inventory Management,
   3.4 Financial Management, and
   3.5 Customer Relations;
4. To determine the business performance of the SME; and
5. To establish the relation between the socio-demographic profile of the SMEs' owners and their extent of management practices as well as between the SME's owners extent of management practice and the business performance of SME.

2. REVIEW OF RELATED LITERATURE

SMEs are essential to the economic growth of one's community. It provides an avenue for job creation, employment opportunities and possible alleviation from poverty. Chin and Suddaby (2017) on The Role of Small and Medium-sized Enterprises in Economic Development: The Case of Rural Area, explores the specific contributions of SMEs to economic development in rural areas, including job creation, income generation, and community development. The study highlights the challenges and opportunities SMEs face specifically in the rural areas and bring forth recommendations in sustaining their economic growth.

In rural communities, SMEs serve as catalysts for economic development by providing employment opportunities and income-generating avenues, thereby improving living conditions for residents. This transformative impact becomes evident when SMEs receive adequate support and resources, creating an environment conducive to business growth and prosperity. Studies have shown that SMEs are confronted with various difficulties and challenges due to the COVID-19 pandemic. The period of closure and movement prevention policies adopted by governments in many countries have greatly affected SMEs, paralyzing their operations, weakening their financial positions, and exposing them to financial risk (Omar et al., 2020; Oyewale et al., 2020). Since management practices play a vital role in SMEs, enhancing entrepreneurial skills became the main goal to effectively meet the demands in the market. The current research is undertaken to assess their management practices and evaluate their business performances.

Nguyen et al. (2020), investigated the contribution of Micro, Small, and Medium Enterprises (MSMEs) to rural development in Southeast Asia. The researchers analyzed data from multiple countries in the region, including the Philippines, to understand how MSMEs impact various aspects of rural development, such as employment generation, income improvement, and community empowerment. By examining the challenges and opportunities faced by MSMEs in rural areas, the study provided insights into policy interventions and support mechanisms needed to enhance the role of MSMEs in driving inclusive and sustainable rural development. The findings offer valuable lessons for policymakers, development practitioners, and stakeholders involved in promoting SMEs and fostering rural economic growth in the Philippines and similar contexts.

SMEs play a crucial role in driving economic development, particularly in rural areas. Understanding the dynamics of SMEs in the Northern Municipalities of Eastern Samar through comprehensive profiling is essential for devising targeted interventions to enhance their growth and competitiveness. This study presents the opportunity to make a substantial impact on regional development initiatives and improve the livelihoods of residents in the Northern Municipalities of Eastern Samar.

3. METHODOLOGY

This research followed the quantitative descriptive survey research method design using a combination of developed adopted survey questionnaire to collect data from a sample of SMEs located in the northern municipalities of Eastern Samar, particularly, Taft, Can-avid, Dolores, Oras, and San Policarpo.

The study was able to ask the consent of 104 SMEs operators/owners as respondents distributed as follows: Taft, 22 SMEs; Can-avid, 20 SMEs; Dolores, 24 SMEs; Oras, 26 SMEs, and San Policarpo, 12 SMEs. To determine the sample size of 104 was needed to achieve a margin of error of 5% with a 95% confidence level, based on a total population of 140. Using Slovin's formula, which is $n = \frac{N}{1 + Ne^2}$, we calculated the necessary sample size. By substituting the population size (N = 140) and the desired margin of error (e = 0.05) into the formula, we arrived at a sample size of approximately 103.70. Since sample sizes must be whole numbers, we rounded up to 104 to ensure the desired statistical precision. This calculation ensures that our findings will accurately reflect the broader population of 140 individuals with a high level of confidence, while maintaining an acceptable margin of error.

This study utilized a survey questionnaire that has two parts. The first part contains items developed by the researchers that ask the personal profile of the SME operators/owners as well as the business profile of the SMEs. The second part is adopted from the research instrument used in the study of Caratay, Palada and Quintua (2019) in determining the extent of practice of business management activities in their SME operations which were rated on a 4-point scale, namely, 1 = Never Practiced, 2 = Seldom Practiced, 3 = Oftentimes Practiced, and 4 = Definitely Practiced.

The data obtained from the study for the profile of the SME operators, their business profile were analysed using descriptive statistics particularly, frequency, and percentage, while the range and mean were moreover used to describe numerical data. The mean of the scored responses of the SME operators to the second part of the survey questionnaire was calculated to determine their extent of business management practices that were interpreted using this guide: 1.0 – 1.75 = Never Practiced, 1.76 – 2.50 = Seldom Practiced, 2.51 – 3.25 = Oftentimes Practiced, and 3.26 – 4.00 = Definitely Practiced.

For the test of relationship between variables, chi square test was used for categorical data and the Pearson correlation for numerical data. Analysis was done through SPSS and Microsoft Excel.

The following null hypotheses were tested in this study at $\alpha = .05$:

1) There is no significant relationship between the profile of the SME owners and their extent of business management practices.

2) There is no significant relationship between the business profile of the SMEs and their owners' extent of business management practices.
3) There is no significant relationship between the SME owners' extent of business management practice and the business performance of SME.

The hypotheses were tested at 0.05 level of significance. The associated sig 2-tailed or observed significance levels (p-values) from the test of difference/comparison will be used in the tests of the hypotheses at 0.05 level of significance using the following guide of McClave and Dietrich (1988, 360-361): The null hypothesis is rejected if the p-value is less than or equal to the fixed significance level ($\alpha = 0.05$) chosen by the researcher; otherwise the null hypothesis is accepted.

4. RESULTS AND DISCUSSIONS

4.1. Profile of the SME Owners and Business Operations

As revealed by the data in Table 1, a great number (almost 55% of the 104 SME operators/owners in the northern municipalities of Eastern Samar who participated in this study) were found to be 41 years of age and older, followed by a little less than one-fourth who were in the age group of 31 to 40 years old. Majority of these SME operators/owners are married, six of whom were already widowed at the time of the study. In terms of highest educational attainment, everybody was able to attend formal schooling, with about 40% of them able to obtain a college degree. However, there were those who were able to attend up to high school studies only and some were not able to graduate in college.

Table 1. Personal profile of SME owners

Profile Variable	Frequency (N=104)	Percentage
Age (in years)		
Less than 20	3	2.9
20 – 30	19	18.3
31 – 40	25	24.0
41 years and above	57	54.8

Civil Status		
Single	27	26.0
Married	77	84.0
Educational Attainment		
Elementary level	1	1.0
High school level	8	7.7
College level	47	45.2
College graduate	48	46.1

In terms of the business-related profile of the SMEs, more of these SMEs are into merchandising/retailing business (Table 2).

Table 2. Business-related profile of the SMEs

Business-Related Variables	Frequency	Percentage

	(N=104)	
Type of Business		
Merchandising/Retailing	48	46.2
Food services	46	44.2
Personal care services	3	2.9
Other services	7	6.7
Years of Business Operation		
One year and below	22	21.2
2 – 5	62	50.0
6 – 10	20	19.2
11 – 20	8	7.6
More than 20	2	2.0
Range = 2 months – 25 years		
Mean = 4.8 years		
Initial Business Capital (pesos)		
Up to 10,000	19	18.3
10001 – 100,000	62	59.6
101,000 – 500,000	19	18.3
500,001 – 1,000,000	2	1.9
More than 1,000,000	2	1.9
Range = 3,000 – 2.5M		
Mean = 126,567.32		

If there are persons helping in the business operation*		
Yes	55	52.9
None	49	47.1
Persons helping in SME's operations		
Hired persons	16	29.1
Friends	2	3.6
Relative	6	9.1
Family member	31	58.2
If there is loan to augment business capital*		
Yes	33	31.7
No	71	68.3
Source of business loan*		
Family/relatives	19	57.6
Friends	4	12.1
Lending institutions/bank	10	30.3
Ownership of business equipment		
Own/personal	54	51.9

Rented	50	48.1

**The base number used in the computation of %age value is the number of the Yes response*

This indicates that this kind of SME is engaged in purchasing goods or products that are resold to the end-users or final consumers. Most of these SMEs are in the forms of sari-sari stores, grocery stores, and hardware stores, while a few of these are engaged in buying and selling school supplies, LPG gas, and RTW items and medicines and medical supplies as a drug store or a pharmacy. This is followed by those who are into food service business such as "carinderia", food and snack inn, fruit and vegetable stand, bakeshop, meat shop, water refilling station, and rice store. In the personal are services business are barber shops and beauty salons, while those engaged in other services are those that sell goods for party needs, poultry needs, cooperative as a lending service, and electronics repair shop.

As to length of business operation, it could be noted in Table 2 that half of the 104 SMEs surveyed are in operation for 2 to 5 years already and a little over one-fourth have been in operation for 6 years and more, the longest of which was 25 years. There were those also in operation for one year or less, the most recent of which was just the preceding two months at the time of the study. Hence, it can be said that these SMEs are just in the infancy stage of their business operation. As to put up or initial capital, one sari-sari store owner reported that only PhP3,000 was used in starting the business. Most of the retailing business has lower initial capital for the business as compared to putting up the cooperative for lending services and the hardware store which required one million pesos and even more in starting the business. On the average,

an initial capital of almost PhP130,000 (mean=PhP126,567.32) was reportedly spent for the business operations of the SMEs.

A great number of the SMEs have helpers in performing the business operations. Of the 55 owners of these SMEs with helpers, more than half stated this came from family members, while there are also relatives and friends who give helping hand. Still others have hired persons.

About one-third of the SME owners said they have availed of loans to augment the operations of their business, with most of them obtained from their family and relatives, from lending institutions, and from friends. A little over half of them personally possess or own the equipment used in the operation of the SMEs; the rest just rented their business equipment.

4.2. Extent of Business Management Practices Observed by the SME Operators

4.2.1. On Supply Management

It can be noted in Table 3 that the SME operators/owners are "definitely practicing" supply management in their business operations. Most notable in their responses was indicated in the highest mean score in providing or selling products or goods that are in top/good quality by maintaining their freshness, cleanliness and good appearance, followed by their practice of using generated income to purchase products/goods for sale, selling products/goods that regular customers look for, buying products/goods from wholesalers, canvassing where purchase cost are cheapest, and of having a schedule for the purchase of products or goods for sale. This finding is commendable since, in the words of Kenton (2018), supply management is essential to the operations of an organization which deals with identifying, acquiring and managing resources as well as suppliers that are necessary to the operations of a business.

Table 3. SME owners' rating on their extent of practice in supply management

Supply Management Practices	SME Owners' Rating on Extent of Practice, f				Mean	Interpretation
	DP	OP	SP	NP		
Canvass where purchase cost are cheapest	83	14	6	1	**3.72**	DP
Have a schedule for the purchase of products or goods for sale	79	22	2	1	**3.72**	DP
Buy products/goods from wholesalers	83	15	5	1	**3.73**	DP
Arrange with distributors	73	23	6	2	**3.61**	DP

for the supply of products/goods						
Sell products/goods that regular customers look for	84	16	2	2	**3.75**	DP
Observe on what the other businesses provide and what they do not provide to give an idea of what goods/items to provide or sell in the business	60	38	5	1	**3.51**	DP
Provide/Sell products or goods that are in top/good quality by maintaining their freshness, cleanliness and good appearance	99	3	2	-	**3.93**	DP
Replenish fast-selling items before stocks run out to be sure of supply availability	61	41	2	-	**3.57**	DP
Stock products/goods that are most in demand by customers	73	28	3	-	**3.67**	DP
Use generated income to purchase products/goods for sale	85	17	1	1	**3.79**	DP
Use borrowed fund to purchase products/goods for sale	44	40	13	1	**3.16**	OP
				OVERALL MEAN	**3.65**	DP

Legend:

3.26 – 4.00 = Definitely Practiced (DP)
2.51 – 3.25 = Oftentimes Practiced (OP)
1.76 – 2.50 = Seldom Practiced (SP)
1.0 – 1.75 = Never Practiced (NP)

4.2.2. On Sales Management

The overall mean of 3.31 in Table 4 suggests that the SME owners also "definitely practiced" sales management in their business operation. Top on the list of this extent of practice were on setting a mark-up for each group of products/goods and in selling goods/products by cash. Other commendable practices were on observing the "First In First Out (FIFO) method where the product/goods that you got first are sold first before selling the ones that were recently obtained or purchased, setting a minimum cash balance every day, checking out competition in the area to determine selling price of goods/products, and in setting aside a daily portion of income to cycle back into the business. However, there were practices observed that were "oftentimes practiced", when not checked adequately, will jeopardize the business operations in terms of its sales. These are: 1) allowing family members to consume goods without paying for them, 2) extending credit to good customers that may compromise cash flow, and the application of a credit policy (e.g., credit limit and payment schedule) in extending credit. Hence, these sales management practices should be given careful attention by these SME operators/owners.

Table 4. SME owners' rating on their extent of practice in sales management

Sales Management Practices	SME Owners' Rating on Extent of Practice, f				Mean	Interpretation
	DP	OP	SP	NP		
Checks out competition in the area to determine selling price of goods/products	64	32	7	1	**3.53**	DP
Set a mark-up for each group of products/goods	81	18	4	1	**3.72**	DP
Repack goods for sale into smaller quantities	70	18	12	4	**3.48**	DP
Sell goods/products by cash	81	19	2	2	**3.72**	DP
Compromise cash flow by extending credit to good costumers	32	42	14	16	**2.87**	OP
Has a set credit policy in place (e.g., credit limit and	21	39	26	18	**2.61**	OP

payment schedule) and applies this while extending credit						
Practice the "First In First Out (FIFO) method where you sell the product/goods that you got first before selling the one that you got recently	64	35	3	2	**3.55**	DP
Sets a minimum cash balance everyday	63	37	2	2	**3.55**	DP
Save cash surplus in a bank	28	44	19	13	**2.84**	OP
Set aside a daily portion of income to cycle back into the business.	62	36	4	2	**3.52**	DP
Set aside a daily amount of sales to pay for the store's operational expenses	60	38	4	2	**3.50**	DP
Allow family members to consume goods without paying for them	29	35	29	11	**2.79**	OP
			OVERALL MEAN		**3.31**	DP

Legend:

3.26 – 4.00 = Definitely Practiced (DP)
2.51 – 3.25 = Oftentimes Practiced (OP)
1.76 – 2.50 = Seldom Practiced (SP)
1.0 – 1.75 = Never Practiced (NP)

4.2.3. On Inventory Management

The practice of inventory management was generally "oftentimes" observed by the SME operators/owners (Table 5). This was particularly true in conducting periodic inventory counts that are used in the procurement of products or goods for sale. However, they also "definitely practiced" investigating discrepancies in inventory.

Table 5. SME owners' rating on their extent of practice in inventory management

Inventory Management Practices	SME Owners' Rating on Extent of Practice, f				Mean	Interpretation
	DP	OP	SP	NP		
Use and pile stock cards daily for each item to facilitate inventory counts	44	39	18	3	**3.19**	OP
There is periodic inventory counts (could be daily, weekly or bi-monthly)	40	45	16	3	**3.17**	OP
Periodic summary of inventory are used in the procurement of products/goods for sale	43	44	14	3	**3.22**	OP
Investigates discrepancies in inventory	49	41	12	2	**3.32**	DP
			OVERALL MEAN		**3.23**	OP

Legend:

3.26 – 4.00 = Definitely Practiced (DP)
2.51 – 3.25 = Oftentimes Practiced (OP)
1.76 – 2.50 = Seldom Practiced (SP)
1.0 – 1.75 = Never Practiced (NP)

4.2.4. On Financial Management

Financial management was well practiced by the SME operators/owners. These operator/owners "definitely practiced" updating daily the record of expenses and income and performing financial analysis regularly (weekly or monthly) to assess their business performance (Table 6). These practices will surely help in checking the financial status of the business operations, because, according to Maseko and Manyani (2011), keeping accurate accounting records generates a profitable business, and recordkeeping is the backbone of every business.

Table 6. SME owners' rating on their extent of practice in financial management

Financial Management Practices	SME Owners' Rating on Extent of Practice, f				Mean	Interpretation
	DP	OP	SP	NP		

Make and update a record of expenses and income everyday	65	30	7	2	**3.52**	DP
Prepare cash flow statement	44	39	18	3	**3.19**	OP
Perform financial analysis regularly (weekly or monthly) to assess the business performance	47	46	9	2	**3.33**	DP
			OVERALL MEAN		**3.35**	DP

Legend:

3.26 – 4.00 = Definitely Practiced (DP)
2.51 – 3.25 = Oftentimes Practiced (OP)
1.76 – 2.50 = Seldom Practiced (SP)
1.0 – 1.75 = Never Practiced (NP)

4.2.5. On Customer Relations

This business management practice was determined to be "definitely practiced" by the SME operator/owners as suggested by the overall mean of 3.58. They did this mostly by keeping in touch with customers to know their needs. Of course, the other good practices that were reported "definitely practiced" by the SME operators/owners as could be noted in Table 7 are worth to be continuously practiced if only to make the business operation of their respective SMEs successful. This corroborates findings in the study conducted by Alusen (2018), that is, giving discounts to customers has a significant relationship with the sales of the sari-sari store business, probably because discounts can easily attract customers, they want to get the product/goods they need at a lesser cost.

Table 7. SME owners' rating on their extent of practice in customer relations

Customer Relations Practices	SME Owners' Rating on Extent of Practice, f				Mean	Interpretation
	DP	OP	SP	NP		
Keep in touch with customers to know their	92	10	2	-	**3.87**	DP

needs						
Establish good personal relationships (by being malambing and mabait) and engage with "chicka-chikca" to maintain loyal costumers	63	33	5	3	**3.50**	DP
Allow/Give regular costumers or "suki" discounts or extra portions in exchange for their loyalty to the store	54	37	8	5	**3.35**	DP
Maintain harmonious personal relations with customers to whom credit was extended to keep their end of the bargain by paying back the loan regularly and continue to purchase exclusively from the store	67	33	3	1	**3.60**	DP
			OVERALL MEAN		**3.58**	DP

Legend:

3.26 – 4.00 = Definitely Practiced (DP)
2.51 – 3.25 = Oftentimes Practiced (OP)
1.76 – 2.50 = Seldom Practiced (SP)
1.0 – 1.75 = Never Practiced (NP)

4.3. Business Performance of the SMEs

As could be noted in Table 8, most of the SME operators said they are conducting assessment of their income from sales daily rather than weekly and monthly. This may be the case since most of the type of business engaged in by these SMEs is on merchandising/retailing. In terms of average income, it could be deduced from the data in Table 8 that the longer the conduct of assessment, the more is the income. This is because those conducting the monthly assessment are those with bigger operating capital for the business, thus, the income will be likely to be bigger also. As revealed by the computed mean value, daily

income was the lowest, followed by that of the weekly income, and the highest was determined from the monthly income.

Table 8. Business Performance of the SMEs

Business Performance Details	Frequency of Response (N=104)	Percent
Frequency of assessing income from sales		
Daily	65	62.5
Weekly	27	26.0
Monthly	12	11.5
Average Daily Income*		
Up to 5,000	44	67.6
5,001 – 10,000	12	18.4
10,001 – 20,000	6	9.2
Above 20,000	3	4.5
Range = 500 – 100,000		
Mean = 7,453.85		
Average Weekly Income*		
Up to 5,000	3	11.1
5,001 – 15,000	10	37.0
15,001 – 20,000	8	29.6
Above 20,000	6	22.2
Range = 2,500 – 100,000		
Mean = 30,555.56		
Average Monthly Income*		

Up to 15,000	3	24.9
15,001 – 50,000	4	33.3
50,001 – 100,000	3	25.0
Above 100,000	2	1.6
Range = 5,000 – 600,000		
Mean = 129,140.83		
Time for the break-even of business performance		
Weeks	38	36.5
Months	66	63.5

**The base number used in the computation of %age value is the number of the response on Frequency of Assessing Income from Sales.*

When asked of the break-even period of the SMEs business performance, almost two-thirds of the SME owners said it took them months. However, not even one of them has reported the exact number of months or weeks. This break-even is a point in business wherein there is no net loss or net gain, which means the store is neither losing nor making money, but all the costs have been covered or have been paid. It is a point wherein the expenses and revenue are equal (Kappel, 2020).

4.4. Relation between the Profile of the SME Owners and their Extent of Business Management Practices

As revealed by the results of the test of relationship in Table 9, it is the age of the SME owners that was found to have a significant relation with their extent of business management practices, only in as far as supply management and sales management are concerned. Moreover, the computed correlation coefficients indicate a rather low direct relation. This suggests that those who were relatively older tend to have better supply management and sales management practices. Probably, because of old age, they

were able to get more good experiences that they believe are worth practicing in order to have an adequate supply and sales from the same supply.

Table 9. Correlation statistics on the test of relationship between SME owners' profile and their extent of business management practices

Business Management Practices	Correlation Statistics					
	Age		Civil Status		Education	
	Computed r	***Sig value (.05)***	***Computed*** χ^2	***Sig value (.05)***	***Computed*** χ^2	***Sig value (.05)***
Supply Management	.213*	.030	4.507^{ns}	.342	6.968^{ns}	.138
Sales Management	.289*	.003	8.993^{ns}	.174	6.201^{ns}	.401
Inventory Management	-.165^{ns}	.095	4.040^{ns}	.671	3.634^{ns}	.726
Financial Management	-.163^{ns}	.099	4.638^{ns}	.591	5.814^{ns}	.444
Customer Relations	.130^{ns}	.187	8.685^{ns}	.192	8.032^{ns}	.236

^{ns}Correlation is not significant at the 0.05 level (2-tailed)

*Correlation is significant at α = 0.05

Table 10 Continued. Correlation statistics on the test of relationship between SME business profile and their extent of business management practices

Business Management Practices	Correlation Statistics					
	If there are helpers in business operation		Kind of helpers in business operation		If there is existing loan	
	Computed χ^2	***Critical value (.05)***	***Computed*** χ^2	***Critical value (.05)***	***Computed*** χ^2	***Critical value (.05)***
Supply Management	2.758^{ns}	.252	8.735^{ns}	.557	1.761^{ns}	.415

Sales Management	4.922^{ns}	.178	13.658^{ns}	.552	2.591^{ns}	.459
Inventory Management	9.606*	.022	15.520^{ns}	.415	2.899^{ns}	.407
Financial Management	11.256*	.010	17.129^{ns}	.311	6.090^{ns}	.107
Customer Relations	14.471*	.002	19.412^{ns}	.196	2.633^{ns}	.452

^{ns}Correlation is not significant at the 0.05 level (2-tailed)
*Correlation is significant at α = 0.05

Table 10 Continued. Correlation statistics on the test of relationship between SME business profile and their extent of business management practices

Business Management Practices	Correlation Statistics			
	Source of business loan		Ownership of business equipment	
	Computed χ^2	***Sig Value (.05)***	***Computed*** χ^2	***Sig Value (.05)***
Supply Management	2.984^{ns}	.935	1.443^{ns}	.486
Sales Management	20.018^{ns}	.067	3.128^{ns}	.372
Inventory Management	19.320^{ns}	.081	4.884^{ns}	.181
Financial Management	16.192^{ns}	.183	6.512^{ns}	.089
Customer Relations	7.920^{ns}	.791	2.653^{ns}	.448

^{ns}Correlation is not significant at the 0.05 level (2-tailed)

As for the civil status and education of the SME owners, these did not significantly influence or have significant correlation with their business management practices. This means, whether the owner was single or married, the way they manage their business did not differ significantly and same was observed with the level of education the owners have attained.

Because of the aforementioned findings, the first null hypothesis that there is no significant relationship between the profile of the SME owners and their extent of business management practices was not fully supported, hence, it is not accepted.

4.5. Relation between the Business Profile of the SMEs and their Owners' Extent of Business Management Practices

The study revealed a no-significant relation between the extent of business management practices of SME owners and the following business profile of the SMEs: kind of helpers in business operation, if there is existing loan, source of business loan, and ownership of business equipment (Table 10). Whereas the number of years of operating the business and initial business capital of the SMEs were both found to have significant relation with the extent of practice of sales management, inventory management, financial management, and customer relations, while the extent of practice of the last three business management earlier mentioned were associated with the presence of helpers in the business operation. The latter finding is understandable since the helpers will in a way give the owners more time in doing the more important job in managing the business. As for the former finding, this may be understood to mean that the more years that the business has been in operation, the more the owners will be given the opportunity to learn the good business management practices for them to perform for the successful operation of the business. The study found out also that the type of business was the only business profile that has a significant relation with the extent of supply management practice among SME owners, which is probably because these operators have a control of the kind of supply they want to sell or provide their customers. The last four business profile variables (kind of helpers in business operation, presence and source of loan, ownership of equipment) did not yield a significant relation with the extent of business management practices among the SME owners.

Based on the foregoing findings, the second null hypothesis was not fully supported, thus, it is not accepted. In other words, there are characteristics or conditions found in the business operations of the SMEs that were not significantly associated with the extent by which the owners of the same SMEs perform their business management practices. The ones that have greater influence on the extent of business management practices of the SME owners were the type of business they were engaged in, the number of years of operating their businesses, the capitalization for starting the business, and the presence/absence of helpers in the business operation.

4.6. Relationship between the SME Owners' Extent of Business Management Practice and the Business Performance of SME

The extent of practicing supply management among the SME owners did not yield a significant relation with the business performance of the SME (Table 11). Whereas, the extent of sales management practice was significantly related with the frequency of assessing business income as well as the average business income. The average income from the SME business operations was found significantly influenced by the

extent of practicing inventory management, financial management, and customer relations, while financial management practice was significantly related with the break-even period of the SMEs. Based on the magnitude of the value of the computed r in Table 11, it could be implied that observing more the business management practice, except that for supply management) would contribute to getting more income for the business. That is, as to degree of relation, there was a moderate relation between sales management practice and average business income (r=.460), while a somewhat low relation was observed between finance management (r=.235) and inventory management (r=.214) and the average income derived from the business operations of the SMEs. All in all, the third null hypothesis stating the there is no relationship between the SME owners' extent of business management practice and the business performance of SME is not supported by the findings above. Therefore, it is not accepted.

Table 11. Correlation statistics on the test of relationship between SME owners' extent of business management practices and business performance

Business Management Practices	Correlation Statistics					
	Frequency of assessing business income		Average business income		Break-even period	
	Computed χ^2	***Critical value (.05)***	***Computed*** ***r***	***Critical value (.05)***	***Computed*** χ^2	***Critical value (.05)***
Supply Management	.616^{ns}	.961	-.049^{ns}	.618	.583^{ns}	.747
Sales Management	13.229*	.040	.460*	.000	2.574^{ns}	.462
Inventory Management	8.755^{ns}	.188	.214*	.029	7.701^{ns}	.053
Financial Management	3.578^{ns}	.734	.235*	.016	9.623*	.022
Customer Relations	10.320ns	.112	.371*	.000	6.532^{ns}	.088

^{ns}Correlation is not significant at the 0.05 level (2-tailed)
*Correlation is significant at α = 0.05

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

In light of the findings of the study, the following conclusions are drawn:

Majority of these SME operators/owners are married, in their forties, and were able to attend college studies and even obtained a college degree.

Majority of the SMEs operating in the northern municipalities of Eastern Samar province are engaged in merchandising/retail business. This and the other business establishments have been in operation for about five years already, there were some recently opened/started two months ago and one has been serving the community for as long as 25 years already. These SMEs have been established at an initial capital of as low as PhP3,000 to as high as PhP2.5 million, or an average of a little less than PhP130,000. Some SMEs have hired helpers while others have their family members helping in the business operation. While a lot of these SMEs did not borrow amount in a form of loan to augment their business operations, these were those who obtained loans from family/relatives and lending institutions. Many of these SMEs possess or own the equipment used in their business.

Except in inventory management which the SME operators were found to "oftentimes practice," the other four business management practices (supply management, sales management, financial management, and customer relations were "definitely practiced" by the SME operators. However, as suggested by the overall mean value of their responses, the SME operators are not fully practicing the activities relevant to proper business management, hence, meaningful intervention could still be given/provided to them for the successful operations of their SMEs.

The three null hypotheses advanced in this study were not fully supported, with the following determined significant relationship between variables:

a) The age of the SME operators and their extent of supply management and sales management practices,
b) The type of business, number of years of business operations, initial capital for the business, and the presence of helpers in the business operations and their extent of
practice of some business management activities, and
c) The extent of business management practices and income from the business.

Despite the absence of Focus Group Discussions (FGDs), the study's findings are validated by the robustness and rigor of the research design and the meticulous application of quantitative methods. The comprehensive survey design, facilitated by a well-structured questionnaire, ensured systematic data collection directly from a representative sample of SME operators/owners. Through meticulous quantitative analysis, including descriptive statistics, chi-square testing, and correlation analysis, the study rigorously examined relationships between variables, with statistical techniques applied rigorously to ensure reliability and validity. The identification of statistically significant relationships between variables provides empirical evidence supporting the conclusions drawn from the data analysis. Thorough interpretation of results within the broader context of SME operations in Eastern Samar allows for actionable recommendations and insights for stakeholders and policymakers. In summary, through a combination of rigorous quantitative methods, systematic data analysis, contextual interpretation, and transparency, the study effectively validates its findings, demonstrating the reliability and validity of the conclusions drawn from the quantitative data analysis alone.

5.2 Recommendations

The following recommendations are hereby offered based on the findings and conclusions of the study:

To help the SMEs considered in this study realize their distinctive role in economic development as a source of employment creation and income generation in the local communities such as those found in the northern municipalities of Eastern Samar province, the business management practices of the operators of these SMEs must be enhanced by local organizations concerned in community development. In this regard, the College of Business Administration of ESSU_Can-avid campus may opt to conduct capability training program for these SMEs such as the **BUSY** (**B**uilding capacity to **U**plift quality through **S**ustainable entrepreneurial initiatives that **Y**ields to economic development) extension program for which the results of this study will be utilized in its design/development.

Lending institutions may also give a helping hand to these SMEs by providing business loans at minimal or lesser interest rate.

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An Assessment Of Market Matching And Expansion Viability Of Selected Msme Products In The Philippines

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ABSTRACT

Each town in the Philippines offer a unique set of products many of which are manufactured by MSMEs. Thus, cultivating businesses that offer these distinctive products are among priority initiatives done for the MSME sector. Because each product and town have a specific set of strengths and needs, however, learning and planning support for each of them should be uniquely done. Which is why this study aims to understand each of the selected product and producer identified in different locations in the Philippines, specifically Leyte, Samar, Cebu, Bohol, Panay, Negros Oriental, Negros Occidental, Bicol, and North Mindanao. Among the objectives is to also identify potential market and marketability for expansion of these products, and then match product and market with the most potential for sustainability. To achieve this, qualitative research through key informant interviews was done among different producers and buyer groups, specifically traditional, non- traditional, and institutional markets. Data gathered were analyzed by utilizing perceptual mapping among others to understand market match and children can now access it from anywhere in these products. Results confirm that different products require different support based on producer's knowledge, skills, and connections, as well as based on location and their potential buyers' needs and preferences. There is also difference in buyer willingness among different product type and level of producer effort with high buyer willingness for man non-food, high-effort products. MSME interventions, however, can be divided into whether they are in the incubator or accelerator phase, and support would vary from upskilling to marketing to market expansion. Recommendations focus on learning first about both the product and the market prior to dwelling into assistance that can be provided as each individual product requires a different type of assistance.

Keywords: MSME; product-market assessment; perceptual map

1. INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) serve as the backbone of any economy, playing a pivotal role in fostering economic growth and development (Houngbou, 2023). These enterprises contribute significantly to job creation, driving employment opportunities in both urban and rural areas, increasing domestic and regional GDP, reducing poverty rates. (Endris & Kassegn, 2022).

However, while MSMEs have the capacity to alleviate poverty, the progress appears slow, such that they have not fully contributed to the reduction of the number and percentage of poor people (Nursini, 2020). One contributing factor is the absence of sustainable business linkages between MSMEs and enterprises (Lora, 2017). The scheme is founded on the premise that facilitating linkages between MSMEs and

enterprises can create effective ways of upgrading MSMEs; facilitate transfer of technology, knowledge, and skills, improving business and management practices and access to markets.

The lack of comprehensive market assessment studies remains a significant challenge for MSMEs in the Philippines as it persists to be confined to the closed circles of large corporations, highlighting that, from a strategic standpoint, it incurs significant expenses (Dayagbil et al., 2021). The Department of Trade and Industry (DTI) and Department of Agriculture (DA) have recognized the necessity of improving market research capabilities among MSMEs and have launched initiatives to bolster market intelligence activities in Cagayan Valley (2023), Negros Oriental (2022), and Pampanga (2024). However, these endeavors are still in their early stages and necessitate broader implementation.

Addressing this gap is crucial for the growth and competitiveness of these enterprises. By investing in capacity building, providing financial support, and fostering collaborative efforts, the government and relevant stakeholders can help MSMEs gain the market insights necessary for informed decision-making and strategic growth.

Hence, this study is dedicated to conducting product-market matching among nine diverse products, including both food and non-food items, across selected provinces in the Philippines. The central focus is on the identification of distinct market segments, a detailed characterization of their specific attributes, and the formulation of efficacious interventions aimed at fostering business expansion and development. Additionally, the study also aims to present a strategic avenue for providing comprehensive guidance and support, delineating the scope of assistance that government and non-government institutions may extend to their respective clientele.

2. OBJECTIVES

This study is guided by the following principal objectives:

- To ascertain the demographic and business profiles of the identified business proprietors;
- To understand market dynamics, with a focus on the identification of constraints and opportunities;
- To formulate targeted interventions predicated on the insights gleaned from the product-market assessment; and
- To create a framework delineating the scope of assistance of government and non-government institutions to MSMEs

2. REVIEW OF RELATED LITERATURE

Considering the increase in demand of market product assessment as similar products develop making the competition high and demand unpredictable, the current literature opens interests on whether this global phenomenon reaches influence to the Philippine MSMEs vis-à-vis how it complements the Philippines with its already-endemic market anxieties (e.g., diverse demands, distinct market segments, geographical proximity, etc.). The review of literature follows thematic areas on the definition and importance of

market-product assessment and influence in the assessment participation of the Philippines (or the lack thereof).

3.1. Market-Product Assessment: Definition and Importance

Consumers play an essential role in the economy and are one of the reasons behind the success of every business, as they are the ones who acquire goods and services for personal consumption (Musumali, 2019). In the current economy and tremendous competition in the industry, businesses compete to match customer's needs and requirements; marketers need to classify various groups to innovate products crafted to fit their needs (Karkkainen, et al., 2001). Likewise, Tanghian & Shaw (2010) stated that for the business to create a competitive edge and survive in the industry, it needs to obtain a market fit. It is a measure that indicates that the offered products and target market desires are positively correlated with each other, hence, the conduct of product market assessment.

Product market assessment is a comprehensive evaluation process aimed at understanding the dynamics between a specific product or service and its corresponding target market. It involves analyzing various factors that influence the viability, demand, competition, and potential success of the product within the market it aims to serve (Miehlbradt, 2001). The primary objective of a product market assessment is to gather insights that can inform strategic decisions and help guide the development, positioning, marketing, and distribution of the product.

Adapted from Springfield Centre BDS 2000 Training Course, module by Marshall A. Bear and Alexandra Miehlbradt (2000). At its most fundamental level, it is crucial to understand who is providing business services, who is in need of these services, and the specific attributes of the transactions occurring between these service providers and clients. This includes details such as the nature of the transactions, how often they occur, and the pricing structure, among other factors.

Going beyond, it becomes important to gain insights into what consumers are aware of regarding business services, their preferences when seeking such services, and their perceptions of the quality they receive. Additionally, it's essential to explore the variety of suppliers in the market and assess their capacity to meet demand. Lastly, it's valuable to uncover alternative channels through which businesses acquire services, such as through personal connections like friends or colleagues, or through in-house capabilities within their own organizations.

The inputs for market assessment will serve as an input in the identification of demand and supply gaps what will enable donor and facilitators to design effective BDS market development program or when redesigning an old program (Committee of Donor Agencies for Small Enterprise Development conference, 2000)

3.2. Market Product Assessment in the Philippines

Market assessment is a critical tool for businesses to understand market dynamics, consumer behavior, and competitive landscapes. It enables enterprises to make informed decisions, identify opportunities, and mitigate risks. For MSMEs, which typically operate with limited resources, the strategic insights derived from market assessments can be crucial for survival and growth.

3.3. Challenges in Conducting Market Assessments

According to Dayagbil, Palompon, Garcia, and Olvido (2021), one of the primary challenges faced by MSMEs in the Philippines is the lack of resources and expertise to conduct thorough market research. The study identifies several factors contributing to this challenge:

- *Limited Financial Resources*. MSMEs often operate on tight budgets, prioritizing immediate operational needs over strategic initiatives such as market research.
- *Lack of Skilled Personnel*. Many MSMEs do not have access to skilled professionals who can conduct comprehensive market assessments.
- *Time Constraints*. The focus on day-to-day operations leaves little time for strategic activities like market analysis (Dayagbil et al., 2021).

Case in point, most published data in EBSCO are on the matters of hypermarkets and supermarkets' offerings of: meat, savory snacks, baby foods, confectionery, cigarettes, etc. From the literature provided, it is apparent that the availability of a market portfolio is from the perspective of already globally established enterprises that are more or less presumed to not suit economic objectives at a localized and experiential level.

3.4. Impact of the Lack of Market Assessments in the Philippines

The absence of detailed market assessment studies has several negative implications for MSMEs in the Philippines. According to a study by the Asian Development Bank (2015), this gap leads to poor market positioning and missed opportunities for growth and expansion. Without adequate market insights, MSMEs struggle to understand consumer needs and preferences, making it challenging to develop products and services that meet market demands.

The DTI (2017) and DA (2024) has acknowledged the need for enhanced market research capabilities among MSMEs and has initiated programs to support market intelligence activities in Cagayan Valley, Negros Oriental, and Pampanga, but these efforts are still in the nascent stages and require broader implementation.

4. CONCEPTUAL FRAMEWORK

Product Market Assessment provides understanding of the labor market needs and opportunities and will therefore be able to provide an increased understanding of the contextual setting (Penninger, 2021). This includes product positioning that guides in the designing of proper interventions and programs to businesses (Miehlbradt, 2001).

[Insert Figure 1. *Process in the development of product-market intervention program design***]**

Hence, Figure 1 presents the conduct of product-market assessment among selected product ranging food and non-food categories across different provinces in the Philippines namely; Leyte, Samar, Cebu, Bohol, Panay, Negros Oriental, Negros Occidental, Bicol, and North Mindanao. Insights regarding the market, its

significant constraints and opportunities will serve as input for the identification of necessary interventions.

4.1. Definition of terms

Microentrepreneurs- business owners of the selected MSME products

Traditional Market- retail channels which include regular trade partners like direct dealers, wholesalers, etc.

Non-traditional Market- organizations that may not necessarily purchase the products but help in the promotional activities such as government organizations like DTI and Department of Tourism (DoT).

Institutional Market- retail channels which include malls, souvenir shops and the like

Product-market assessment- evaluation process aimed at understanding the dynamics between a specific product or service and its corresponding target market**.**

5. METHODOLOGY

This section outlines the research methods and procedures employed to achieve the objectives of this study. The methodology encompasses data collection, respondent selection, data analysis techniques, and any tools or instruments used in the research.

5.1. Research Design

The research methodology employed in this study is grounded in a qualitative research design, specifically utilizing Key-Informant Interviews (KII). KIIs were chosen as the primary data collection method due to their capacity to elicit valuable information from individuals with expert knowledge and direct experience in the market. These interviews provide a platform for participants to share their insights, opinions, and observations, contributing to a holistic comprehension of the market dynamics.

5.2. Research Respondents and Locale

There are a total of 51 respondents for this study: 9 business owners, 15 traditional retails, 18 non-traditional retails, and 9 institutions. These nine pre-selected products have been carefully selected by a microfinance institution for a specialized program. Following product nominations from all branches, a panel designated one product to represent each of the nine districts, ensuring no product duplication. The objective was to assess the demand-supply gap for these products, enabling the institution to gain deeper market insights and better support its clients.

For market institutions, traditional channels include regular trade partners like direct dealers, wholesalers, etc. (Srivastava, 2013). On the other hand, Srivastava (2013) defines non-traditional retail refers to all other formats of retail stores like Hyper markets, Department Stores, and Specialty Stores which may also include organizations that may not necessarily purchase the products but help in its promotional activities such as government organizations like DTI and DoT .

Below is the breakdown of the sample size per district/area per microentrepreneur and market group.

[Insert Table 1. *Breakdown of sampling respondents for the market matching study of selected products across provinces in the Philippines (n=51)***]**

5.3. Research Instruments

Two instruments were employed in this research. The first tool is the supplier diagnostic which was administered among business owner respondents. It aims to take a closer look at the supply side of the market by interviewing and observing suppliers. It helps the researcher explore some of the supply side weaknesses found during the consumer research and pinpoint more precisely suppliers' weak points for possible areas of intervention (Miehlbradt, 2001).

To supplement the supplier diagnostic, a market assessment tool was developed which will be facilitated among market groups. This tool is designed to get accurate and useful information from consumers in order to expand the sales of suppliers (Miehlbradt, 2001).

Miehlbradt (2001) cited that when looking at both the consumer data and the supplier data, it is useful to analyze "gaps" or areas where consumers and suppliers have different points of view.

5.4. Analyses

Minitab Statistical Software was employed to perform descriptive statistical analysis, focusing specifically on the business profiles of the business owners. Simultaneously, the Key Informant Interviews (KIIs) conducted with market groups were organized into a Buyer Comparison Table.

Subsequently, the KIIs conducted with both business owners and market groups were utilized to construct a comprehensive SWOT Analysis. SWOT analysis is a systematic procedure aimed at identifying and evaluating the strengths, weaknesses, opportunities, and threats pertinent to a specific organization, project, product, or situation (Raeburn, 2022).

In addition, the study incorporated the use of perceptual mapping, a strategic visual technique widely recognized for pinpointing product positioning within the perspective of the target market (Sharma, 2014). Drawing insights from these interviews, each product was carefully evaluated and positioned accordingly.

6. RESULTS AND DISCUSSION

Nine microentrepreneurs from various provinces were surveyed to gather information about their demographics and business profile, geographic locations, and product specification. Simultaneously, 42 market groups were also examined about their product requirements, and additional product details preferences. The survey also explored their perceptions of potential buyers' willingness and sought their recommendations. The results of this survey have been visually represented through graphs and are further explained in the following text.

6.1. Microentrepreneur's Business Profile

The table below breaks down the business profile of the respondents. All of them are members of a microfinance availing micro-credits with an average loan amount of *M= ₱26,000, SD=₱12,757.35* to sustain their business. Most of them are more than 10 years (*M=18.33, SD=10.15)* in the business with a net income of almost *M= ₱15,480.56, SD=₱18,426.35.*

[Insert Table 2. *Business profile of microentrepreneur respondents in the select provinces in the Philippines (n=9)***]**

6.2. Business Stories of the Selected MSME Products

6.2.1. Negros Occidental's Shell Craft

Gemma's husband, Leonil, was a factory worker in Robles Exporter Shell Craft in Iloilo where Gemma was from. As Leonil got his knowledge in crafting Capiz shell products, they decided to make a business from it. Leonil worked on crafting shell products while Gemma worked on managing the business and carrying their business name to the market.

Gemma and Leonil have been buying Capiz shells and crafting products for 35 years while Gemma has been a client of a microfinance company since 2019.

6.2.2. Negros Oriental's Native Bag

As a curious kid, Rico watched his neighbors weave these strings of pandan into bags. In his awe, he learned these ways, made a living with these bags, and eventually taught his family this art.

He is now expanding into making dispenser covers and wallets. Unfortunately, he doesn't know how to add linings and handles into his bag, prompting him to send his bags to a middle woman. He is also very hesitant in attending training for an upskill. The middle woman mentioned that Rico is one this trusted men to do quality outputs.

6.2.3. Samar's Pili Nuts

Nanay Maria started her business 30 years ago, she was 32 years of age when she learned it from her friends making pili nut products.

She produces the product by itself from buying Pili Nuts and produces different types of Pili Products if she got orders from the community, neighbors, and others whom she is known for making that product.

She produces different Pili products and displays it in the Grand tours terminal to sell to the passengers.

6.2.4. Bicol's Abaca Slippers

Nanay Melanie learned the craft of making abaca slippers while working for a local company. She decided to get her own suppliers and started her own business in 2007. Currently, she gets financing from micro-finance institutions like ASA and RAFI MFI to which she assumes an active role as chairman.

For now, she does not have any employees. Nanay Melanie works in the morning by assembling and sewing the slippers and her husband glues the rubber in the evening. But she plans to hire so she can cope with the demand for slippers.

6.2.5. Bohol Tarsier souvenirs

In 2020, Marilo lost her job at a networking company due to COVID pandemic, unfortunately the office decided to close. But even back then, Marilo was already doing her tarsier supply business. At the same year of the COVID pandemic, her father got sick and hospitalized until he passed away. Marilo and her family was left with zero funds.

Soon after, she got her capital from the SAGIP loan from RAFI MFI to help her start the tarsier supply business again. She has been supplying small resellers from different places in Bohol, in the blood compact where there are nearby souvenir shops; to Tubigon, Hagna, Luboc, and more.

In the future, she hopes to have her items placed in different provinces, including Cebu and be featured in our local museum gift shops**.**

6.2.6. Cebu's Native Basket

When Annie married her husband, she married a family of native basket makers. From them, she learned the art of native basketry.

Nanay Annie and her husband established their small business of native products for 15years. She also experienced some difficulties in life such as no sales and financial problems, but she just trusts God and her family and now their business is growing.

6.2.7. North Mindanao's Hinabol

Bag Like heirloom passed on from one family member to another, Jeany learned the art of abaca making from her mother, who in turn learned it from her mother.

Now with the help of a microfinance institution as her partner for her financial business needs, Jeany is selling abaca products like bags, table runners, and place mats. She also teaches other interested MSMEs the art as she is invited by the Department of Trade and Industry as their trainer. The same way that her mother and grandmother passed down the trade, Jeany also started teaching her kids the valuable skill.

6.2.8. Leyte's Tablea

When Ms. Jocelyn was younger, there were cacao trees in their ancestral compound. Her grandmother would traditionally make tablea from dried cacao seeds from their backyard.

Now they have a cacao farm in Tagum, Davao del Norte and, they partner with local cacao producers in Davao where they get supplies of their product.

Nanay Jocelyn wants to grow her business and improve her processing area. She also wishes to learn chocolate-making to help her family.

6.2.9. Panay's Pancit Canton Noodles

In 2013, Nanay Julie Loreto's husband left his employment in a Chinese Pancit Canton Factory in Iloilo City. With his knowledge of pancit canton production, he and Julie Loreto decided to open their own business in the style of pancit canton, miswa, and pancit molo.

Their first customers were neighbors with sari-sari stores. Slowly, they enter the población market. Since then, they've expanded their buyer's coverage to Northern and Central Iloilo. Their team had also developed with the help of their children and three more hired help.

Nanay Julie hopes to expand her business coverage in Iloilo City and Southern Iloilo.

6.3. Product Market and Supply Gap

Based on insights gathered from KIIs conducted with business owners (suppliers) and market groups (consumers), a comprehensive analysis, including the creation of buyer comparison tables and Strengths, Weaknesses, Opportunities, and Threats (SWOT) analyses for each specific product within a particular province were undertaken to gain a deeper understanding of the existing demand and supply gaps for these products. Below are the findings:

6.3.1. Negros Occidental's Shell Craft

According to the buyer comparison table, Gemma has the sales with a traditional retail specifically a middle woman. The table also suggests that shell crafts are highly seasonal in nature which is also reflected in the SWOT analyses for shell craft.

[Insert Table 3. Buyer Comparison Table for Negros Occidental's Shell Craft**]**

[Insert Table 3.1 SWOT Analyses for Negros Occidental's Shell Craft**]**

Hence, intensive marketing is important providing more exposure to more potential buyers especially during Ber months.

6.3.2. Negros Oriental's Native Bag

Buyer comparison table has shown that across market groups, the middle woman who buys the body of the bag from Rico has the highest possible revenue because of its bulk order which can be bought at ₱160.00 per piece.

[Insert Table 4. Buyer Comparison Table for Negros Oriental's Native Bag**]**

However, if Rico will be able to produce the body of the bag with its lining, handle, design, he has the capacity to sell its bag at ₱3000.00 per piece under the assumption that the demand is the same. Yet, SWOT analyses have shown that one of the weaknesses of Rico is his hesitation and commitment to finish Entrepreneurial Development Training so he could learn how to add lining, handle, and design for the bags.

[Insert Table 4.1 SWOT Analyses for Negros Oriental's Native Bag**]**

Hence, Rico may undergo product development training where he can learn (1) sewing lining & handles for the bag and (2) creation of new weave designs for bags and dispenser covers to produce a personal brand for the products. Business registration in DTI is also encouraged so that Rico can avail itself of the services and opportunities by DTI.

6.3.3. Samar's Pili Nuts

Competition is very high in selling pili nuts, especially that it is a native delicacy in Samar. Hence, it may not be as appealing to its area compared to its outside market. Thus, domestic and international exports may be good for Maria's Pili Nuts.

[Insert Table 5. Buyer Comparison Table for Samar's Pili Nuts**]**

[Insert Table 5.1 SWOT Analyses for Samar's Pili Nuts**]**

6.3.4. Bicol's Abaca Slippers

Across products, the Abaca slippers has the highest net income. According to Melanie, the availability of raw materials in the vicinity has lowered production costs, increasing net income. The buyer comparison table and SWOT analyses show that among market groups handicraft stores have the highest market potential.

[Insert Table 6. Buyer Comparison Table for Bicol's Abaca Slippers**]**

[Insert Table 6.1 SWOT Analyses for Bicol's Abaca Slippers**]**

However, one major threat is the presence of similar products across competitors.

6.3.5. Bohol's Tarsier Souvenirs

Amongst market groups, Marilo can get its highest revenue among souvenir resellers, as shown in the buyer comparison table. She has established connections, supplying nearby souvenir shops and resellers in different parts of Bohol in Tubigon, Hagna, Luboc, and more.

[Insert Table 7. Buyer Comparison Table for Bohol's Tarsier Souvenirs**]**

Marilo's strengths include her capacity to produce 100 items per day across five product designs, allowing her to supply most clients. Nonetheless, while Marilo's reach is already wide, this can be expanded among hotels on well-known beaches in Bohol.

[Insert Table 7.1 SWOT Analyses for Tarsier Souvenirs**]**

6.3.6. Cebu's Native Basket

As shown in the SWOT Analyses, major weakness and threats that can be pointed out for Cebu's Native Basket in the limited purchase from her buyers and is highly seasonal. While she has relatively higher net income compared to other businesses this can be maximized through trade fares hosted by DTI and other organizations.

[Insert Table 8. Buyer Comparison Table for Cebu's Native Basket**]**

[Insert Table 8.1 SWOT Analyses for Cebu's Native Basket**]**

6.3.7. North Mindanao's Abaca Products

While the product is highly intricate, its weakness lies in its low demand. Customers only buy a few pieces as shown in its buyer comparison table and SWOT analyses.

[Insert Table 9. Buyer Comparison Table for North Mindanao's Abaca Products**]**

[Insert Table 9.1 SWOT Analyses for North Mindanao's Abaca Products**]**

Hence, Jenny may consider personal branding for abaca products and expand its market outside the North Mindanao, where weaving is not prominent.

6.3.8. Leyte's Tablea

Competition is the main threat for Jocelyn's tablea in reference to the buyer comparison table below.

[Insert Table 10. Buyer Comparison Table for Leyte's Tablea**]**

There is no product differentiation between Tablea brands. Market expansion to other provinces is encouraged. Investing in product development such as making of chocolates maybe explored.

[Insert Table 10.1 SWOT Analyses for Leyte's Tablea**]**

6.3 .9. Panay's Pancit Canton

Julie's expansion to from neighbors to sari-sari store, to población market, to expanding customer base outside their locals including Northern and Southern Iloilo has greatly increased revenue.

[Insert Table 11. Buyer Comparison Table for Panay's Pancit Canton**]**

Expansion to restaurants and other provinces with the help of DTI can aid in advancing the market.

[Insert Table 11.1 SWOT Analyses for Panay's Pancit Canton**]**

6.4 Market Analysis

Rapid Product Market Assessment provides understanding of the labor market needs and opportunities and will therefore be able to provide an increased understanding of the contextual setting (Penninger, 2021). This includes product positioning that guides in the designing of proper interventions such as training to businesses.

KII results show that a perceptual map can be derived which combines two dimensions (a) Type of Product and (b) Variation of Product that can determine local market's receptiveness to the product. The perceptual map also directs in understanding product positioning and identifying significant interventions fit for business development.

The first dimension (horizontal) is the type of product, food, and non-food products. Food products are items that are intended for human consumption to provide nourishment and sustenance. They are typically consumed for their nutritional value and can include a wide range of items such as fruits, vegetables, grains, meats, dairy products, and beverages.

Non-food products, on the other hand, are items that are not intended for consumption and do not provide nutritional value. They serve various other purposes, such as utility, entertainment, personal care, and more. Non-food products can include things like electronics, clothing, furniture, cosmetics, cleaning supplies, and many others.

The second dimension pertains to the variation of products (vertical): high and low variance. High variance products are defined as commodities that can be formed in numerous forms and that require high level skills. For instance, coconuts are renowned for their versatility. It can be transformed as a soap, oil, lumber etc. Low variance products on the other hand, have few product forms and require basic skills.

[Insert Figure 2. Perceptual map of identified MSME products in the Philippines (n=9)**]**

There are four quadrants representing clusters. The following are:

- Cluster 1- Due to its product's intricacy and high variance, it has relatively low production volume. Local and export markets are promising to this cluster.
- Cluster 2- These cluster's product supply is seen to be very native to its locality. Hence, it may not be as appealing to its area compared to its outside market.
- Cluster 3- Though it may have low variance, these are consumable products and are leaning towards food essentials, thus local markets are still responsive to these.
- Cluster 4-Local markets are not very receptive because it is highly saturated in the area. These products are also seen to have low variation; thus, it can easily be replicated by competitors.

Each identified cluster has specific challenges that need to be addressed. For example, while cluster 1 and 3 are expected to have high demand from specific markets, additional support for branding, domestic and international export maybe needed. On the other hand, cluster 2 and 4 appear to have low market uptake, hence upskilling and branding may be needed. This is illustrated in the table below:

[Insert Table 12. Specific interventions for Cluster 1,2,3 and 4**]**

6.5. Recommended Interventions for the selected MSMEs

The figure below shows the internal and external support that institutions can provide to microentrepreneurs. Internal support is defined as the assistance that microfinance institutions can give to its clients. This can be in the form of financial and non-financial services. Conversely, external support is a subsistence that outside organizations from the MFI such as DTI and DoT can provide.

[Insert Figure 3. Recommended internal and external interventions for identified MSME products in the Philippines**]**

This is subdivided into two programs: incubator and accelerator program. Incubator programs primarily focus on nurturing the early stages of a startup's development. Their main objective is to provide a supportive environment for startups to establish a solid foundation (Mancuso, 1959). Thus, refining business ideas, conducting market research, developing prototypes, and building a viable business model can serve as the forms of assistance both MFIs and external support can give to clients.

Accelerator programs, on the other hand, are geared towards startups that have already progressed beyond the idea stage and have a minimum viable product (MVP). The main goal of accelerators is to rapidly scale and grow startups, often within a fixed timeframe (Graham, 2005). Incubator and accelerator

programs are innovative approaches to foster the growth and development of startups and early-stage businesses.

7. CONCLUSION AND RECOMMENDATIONS

7.1 Conclusion

In summary, the objective of this research was to gain a comprehensive understanding of the market conditions affecting Micro, Small, and Medium Enterprises (MSMEs) and to delineate the various constraints and opportunities therein. This endeavor aimed to formulate well-informed recommendations for strategic interventions aimed at fostering business development within this sector. The study's cohort included nine (9) MSME proprietors who availed microcredit services from microfinance institutions spanning selected provinces, as well as 51 traditional, non-traditional, institutional markets groups who participated in the KIIs. These interviews primarily centered on the intricate dynamics of market demand and supply.

Results reveal that while each respective MSME has significant strengths and challenges, a perceptual map with product category (food and non-food) and variance (low and high variance) can be derived to determine willingness of local market groups to buy the products. It has been found that 9 MSME products can be categorized into four (4) clusters. *Please see Figure 2.Perceptual map of identified products*. Cluster 1 and 3 local markets are very receptive to the products while Cluster 2 and 4 products have relatively low receptiveness from local markets.

Hence, specific interventions for each cluster *(Please see Table 12. Specific interventions for each cluster)* can be implemented following the incubator and accelerator program model (*Please see Figure 3. Recommended internal and external interventions for businesses*). The incubator and accelerator program model shows how microfinance institutions (aside from microcredit) and government organizations such as DTI and DoT can assist in the development of MSMEs.

This perceptual map serves as a valuable framework for product categorization, facilitating the identification of targeted market interventions conducive to the advancement of Micro, Small, and Medium Enterprises (MSMEs). Furthermore, the envisaged incubator and accelerator program presents a strategic avenue for providing comprehensive guidance and support, delineating the scope of assistance that microfinance institutions may extend to their respective clientele.

7.2 Recommendations

While the study has provided insights into the conduct of product-market assessment in the Philippines, the researchers would like to put forth recommendations for future studies.

1. Expansion of Geographical Scope. Future studies may include other provinces not in the list of provinces explored. This includes those in Luzon and Mindanao.

2. Utilization of Derived Perceptual Map for Product Categorization. Initiatives related to program design for small enterprises (SE's) may test current perceptual maps for product categorization and program intervention.

3. Use of Quantitative Research Design. While qualitative research design provides in-depth knowledge and experience of client-respondents, quantitative research uses numerical data that can be objectively measured and analyzed statistically which can shed light to a more holistic product-market assessment.

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INCLUSIVE ENTREPRENEURSHIP

Scaling Up Capacities of Community-Based Enterprises for Economic Empowerment of Persons with Disability (S.U.C.C.E.E.D) Program of Camarines Norte State College-College of Business and Public Administration

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ABSTRACT

This paper is an extension article that aims to analyze the impact of Scaling Up Capacities of Community-Based Enterprises for Economic Empowerment of Persons with Disability (S.U.C.C.E.E.D.) Extension Program of Camarines Norte State College' College of Business and Public Administration to Persons With Disabilities (PWDs) in the Province of Camarines Norte. This program aims to develop and improve the capabilities of PWD-led local enterprises, promote inclusive and sustainable business practices, strengthen the foundations, and increase the growth potential through organizational development, long-term market access to start-up capital and access support.

In the 2030 Agenda for Sustainable Development, disability is included in the following goals: **Goal # 8**, promoting inclusive economic growth, full and productive employment allowing PWDs to fully access the job market; and **Goal # 10,** emphasizing the social, economic, and political inclusion of PWDs. Due to the COVID-19 pandemic, many Filipino workers were displaced and put out of work. The vulnerabilities of PWDs in employment were further exacerbated with not only having an impairment but also having to compete with jobless but able-bodied workers.

The S.U.C.C.E.E.D. program aims to uplift the living standards of PWDs in Camarines Norte by equipping them with skills and business competencies enroute of running and managing a sustainable business. The CNSC-CBPA Extension Service team headed by Ms. Malyn Manalo-Asay and Dr. Angeles M. Asay, Jr.I, conducted a Needs Assessment consultation with the members of Camarines Norte PWD Association (CNPWDA) . The result showed that the eco-friendly bag will have the main potential as their income-generating project. Another unique selling feature of the product is that it will be hand-crafted with love by the PWDs in the province. Thus, these quality tote bags created by PWD sewers of SUCCEED were born and are now making waves in social media for their durability, affordability and customer-driven designs.

Furthermore, the majority of the beneficiaries or the PWDs had an apparent disability and their assigned task or role depended on their disability. S.U.C.C.E.E.D is a five-year comprehensive program with sustainable activities intended for the

PWDs of Camarines Norte and they are now earning 40% of every item they made.

Keywords: Accessibility, Inclusive, Livelihood, Persons with Disability, S.U.C.C.E.E.D

1. INTRODUCTION

According to the International Labor Organization (ILO), 15 percent of the world's population lives with some form of disability, and 80 % of them are of working age[1].

In the Philippines, the 2010 census reports that 1.57 % (or an estimated 1.44 million people) of the population lives with some form of disability[2]. According to the Asian Journal (2019) that cited a 2018 version ofUS State Department Country Report on Human Rights Practices, PWDs experienced continuing discrimination in hiring and employment in the Philippines. The Labor Department estimated that only 10 % of employable PWDs were able to find work[3]. However, there is no official data from the Philippine government about disability employment statistics.

In the 2030 Agenda for Sustainable Development[4], disability is included in two goals. The first one is Goal # 8, *Promoting inclusive economic growth, full and productive employment allowing PWDs to fully access the job market*. By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value. The second is Goal # 10, *Emphasizing the social, economic, and political inclusion of PWDs*. By 2030, empower and promote the social, economic, and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.

Due to the COVID-19 pandemic, many Filipino workers were displaced and put out of work. The vulnerabilities of PWDs in employment were further exacerbated with not only having an impairment but also having to compete with jobless but able-bodied workers. The S.U.C.E.E.D. program aims to uplift the living standards of PWDs in Camarines Norte by equipping them with skills and business competencies enroute of having a sustainable business run and managed by them.

The S.U.C.E.E.D. Extension Program developed and improved the capabilities of PWD-led local enterprises and promoted inclusive and sustainable business practices. This program aims to strengthen the foundations and increase the growth potential of these enterprises, through organizational development, partnerships with local economy drivers, long-term market access to start-up capital, and access support. For the pilot phase, the Camarines Norte State College' College of Business and Public Administration (CNSC-CBPA) implemented it, in partnership with Camarines Norte Person with Disability Affairs Office (CNPDAO), Camarines Norte Person with Disability

Association (CNPWDA), and the Project Inclusion Network (PIN). All parties shall cooperate in promoting and implementing the objectives, and activities of the *SUCCEED* Program; organized agreed-upon activities, based on the Project SUCCEED Plan that promote access to work and entrepreneurship opportunities for PWD ; and, exert necessary efforts to protect the interest of Persons with Disability with the objective of preserving a harmonious relationship among the parties.

Moreover, the PWDs of Camarines Norte are now earning from zero (0) to 40% of every item that they produce. Also, they are now having the S.U.C.C.E.E.D Livelihood Kiosk that serves as their showroom and production facility.

[1] *Republic of the Philippines - Department of Health. (n.d.). Persons with Disabilities. Department of Health.* https://doh.gov.ph/persons-with-disabilities

[2] *International Labor Organization. (n.d.). Disability and work.* https://www.ilo.org/global/topics/disabilityand-work/lang--en/index.htm

[3] *Mendiola, R. (2019, March 16). PWDs in PH continue to face discrimination. Asian Journal News.*https://www.asianjournal.com/philippines/across-the-islands/pwds-in-ph-continue-to-face-discrimination/

[4] *2030 Agenda for Sustainable Development Goals. United Nations Member State 2015.* sdgs.un.org/goals

This program aims to assess the needs of PWDs to formulate concrete program/project leading to a sustainable business project of the beneficiaries; to provide skills and competencies related to beneficiaries' chosen livelihood products; to enhance organizational and management capacity of CNPWDA to sustain the livelihood project; and to empower the PWD sector through various skills trainings and workshop.

2. LITERATURE REVIEW

In view of Related Literature, economic empowerment of PWDs is a critical aspect of achieving inclusive and sustainable development.

This extension article has shown that PWDs often face significant barriers to employment and entrepreneurship, including discrimination, lack of access to education and training, and limited access to financial resources (Mitra, 2018)[5]. The initiatives that aim to foster the economic empowerment of PWDs, such as the development of community-based enterprises, have been recognized as effective strategies for promoting social inclusion and improving the quality of life for this marginalized population (Kalargyrou & Volis, 2014)[6].

The Community-Based Enterprises and Disability Inclusion Community-based enterprises (CBEs) have emerged as a promising approach to addressing the socio-economic challenges faced by marginalized communities, including PWDs (Peredo & Chrisman, 2006[7]; Haugh & Talwar, 2016)[8]. CBEs are locally-driven, community-owned businesses that aim to create sustainable livelihoods and address the unique needs of their target populations (Peredo & Chrisman, 2006). Studies have highlighted the potential of CBEs to foster the economic empowerment of PWDs by providing them

with opportunities for employment, skill development, and entrepreneurship (Kalargyrou & Volis, 2014; Haugh & Talwar, 2016).

The scaling up of community-based enterprises is a critical challenge in achieving sustainable impact and reaching a larger number of beneficiaries (Uvin, Jain, & Brown, 2000[9]; Bloom & Chatterji, 2009[10]). Strategies for scaling up CBEs include the replication of successful models, the development of partnerships and networks, and the integration of CBEs into larger economic and policy frameworks (Uvin et al., 2000; Bloom & Chatterji, 2009).

The successful scaling up of CBEs can lead to increased access to resources, improved service delivery, and greater social and economic impact (Bloom & Chatterji, 2009; Haugh & Talwar, 2016).

[5] *Mitra, S., & Mitra, S. (2018). Functional Difficulties and Inequalities Through a Static Lens. Disability, Health and Human Development, 89-127. https://link.springer.com/chapter/10.1057/978-1-137-53638-9_5*

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Furthermore, this extension article may be used as reference for future research and extension activities of both public and private agencies to uplift the lives of the PWD community and other marginalized sectors.

3. METHODOLOGY

This program attuned with the findings/conclusions of the research study entitled, "Inclusion of PWDs (PWDs) in the Mainstream Labor Force in the Province of Camarines Norte". (Manalo, 2020) [11]:

> The majority of the respondents have orthopedic disability. There was more non permanent and self-employed; The majority of the qualifications/skill/traits that persons with disability shall be hardworking to consider hiring them in the labor market; Most of the PWDs in Camarines

Norte is belong to cosmetologist in terms of type/classification of skills; Among others recommendations the most chosen is the Provincial Government of Camarines Norte shall conduct job fairs intended for PWDs (PWDs) and in General Sectors opted provide start-up funds for PWDs (PWDs) entrepreneur; and The majority of the selected industry hired Persons with Disabilities (PWDs), in terms of recruitment of PWDs they are hired based on educational qualification and experience and selected industry not hiring PWDs based on accommodation. In terms of character traits, the selected industry agreed that PWDs are committed and loyal, and performed their functions. In hiring benefits, selected industries believed that the knowledge of PWD can be an asset of their company/organizations.

Social Theory of Disability, (Michael Oliver and Colin Barnes, 1960)[12]:. This theory started with the movement of the 1960s that began to challenge long-held assumptions and theories based on seeing disablement as a personal tragedy and an individual medical issue, explained through a person's functional limitations or deficits. Through struggle, they recognized common characteristics of their experience of disability. Their aim was to shift public and policy attention away from established orthodox towards the role of disabling economic, political and cultural barriers that prevented people with disabilities from participating in mainstream society as equal citizens.

On April 14, 2021, The CNSC-CBPA headed by Ms. Malyn Manalo-Asay and Dr. Angeles M. Asay, Jr.I, together with CN-PDAO conducted a Needs Assessment Consultation to the Officers and Members of Camarines Norte PWD Association (CNPWDA). The needs assessment was an offshoot of the online consultation meeting with Project Inclusion Network (PIN) last April 8, 2021, conducted via Zoom. PIN is a non-profit organization established to enable communities to improve access to opportunities for PWDs, towards a more inclusive and barrier-free Philippines. All partner agencies were responsible to cooperate in promoting and implementing the SUCCEED program objectives and activities, organizing agreed-upon activities, based on the Project SUCCEED Plan, to promote access to work and entrepreneurship opportunities for PWDs. Likewise, the shall exert necessary efforts to protect the interest of PWDs with the objective of preserving a harmonious relationship among the parties.

The results of the round table discussion showed that the eco-friendly bags will have the main potential for their income generating project. Mr. Henry Bustamante, a PWD leader from Talisay, Camarines Norte, shared his knowledge about the benefits of the eco bag by selling them to different establishments like drug stores, shopping malls, etc. Further, he said that eco-friendly bags

[11] *Manalo, M. (2020). "Inclusion of Persons with Disabilities (PWDs) in the Mainstream Labor Force in the Province of Camarines Norte". Camarines Norte State College. Daet, Camarines Norte – Philippines.*

[12] *Oliver M., Barnes C. (1990). A Social Theory of Disability. People with Disability, Australia.* https://isreview.org/issue/90/social-theory-disability/index.html

are stronger, much more durable, recyclable, and eliminates the need for single-use plastic bags that have proven to be harmful to the environment. The members of CNPWDA agreed the eco-bag is indeed saleable because it is a relevant, practical, economical and environmentally friendly product. Its other unique selling feature is that it is handcrafted with love by the PWDs in the province.

In addition, one of the major findings in the Needs Assessment Consultation is that cooperativism is the best suited form of organization for the PWD attendees. And so, CNSC-CBPA, Team headed by Ms. Malyn Manalo-Asay and Dr. Angeles M. Asay, Jr.I, conducted an activity on the topic of Cooperativism for PWDs in partnership with the Cooperative Development Authority (CDA) and Camarines Norte PDAO last May 19, 2021, held at the Agro-Sports Center, Daet, Camarines Norte.

The Cooperative Development Authority (CDA) represented by Mr. Anthony Galvan oversaw the conduct of the Pre-Registration Seminar (PRS) attended by 25 PWDs members consisting of 19 females and six males. Later in the afternoon, Ms. Malyn Asay and Dr. Angeles Asay facilitated the election of Board of Directors and the Committees of the group, now known as Camarines Norte PWD Cooperative. The registration of the group was assisted by CNSC-CBPA to CDA.

Partner agencies provided financial support for the implementation of the program.Camarines Norte PDAO provided financial support in the amount of Fifty-Six Thousand, Two Hundred Fifty Pesos (PhP 56,250.00) and assistance in designing and implementing the Capacity Development Plan. Project Inclusion Network provided the minimum financial support in the amount of Fifty Thousand Pesos (PhP 50,000.00) to be utilized in the development, strengthening, and growth of the entrepreneurial capabilities of the selected PWD beneficiary organization. CSNC-CBPA provided Thirty-four Thousand Two Hundred Forty-one Pesos (PhP 34, 241.00) which was utilized in implementing the primary activities of the Capacity Development Plan to support the development and initial growth of the selected PWD beneficiary organization. The amount shall cover the support for training venue, training meals and training materials for the Eco bag Design Training and Prototype Workshop.

The Needs Assessment aimed to assist the CNPWDA on its goal of improving the project implementation and to deliberate the sustainable livelihood program for PWD. It also provides discourse in the community partnership, capacity development and prototyping of the products in the livelihood programs that need to be explored. The participants exchanged views on the ways they can work together in enabling the organizational capacities and the means to maximize the opportunity to become a beneficiary of a livelihood grant being made available by the Project Inclusion.

Furthermore, the monitoring and evaluation (M&E) conducted by M&E officers from

Extension Coordinator Office/ Extension Services Division/ Office of the Vice President for Research and Extension. The Terminal Reports/Monitoring Report was submitted for Post-Training Monitoring and Quarterly Monitoring. This monitoring activity is purposely done to evaluate further the implementations and for the sustainability of the program.

Moreover, majority of the participants or the PWDs were having apparent or orthopedic disability and the task or role assigned to them was based on their disability.

4. TRAININGS

To answer the issues that come up from the TNA activity, the desired impact or outcome of the program are to provide a sustainable livelihood and income generating program specifically for PWDs; assisting in uplifting the lives of the PWDs in the Province; and, promoting their rights to employment and livelihood through the provision of continuous skills and competencies trainings like basic entrepreneurship, financial literacy, bookkeeping, leadership, and cooperative orientation.

The S.U.C.C.E.E.D Program is a five-year comprehensive program with sustainable activities intended for the PWDs of Camarines Norte. These include the following trainings: (1) Training on Livelihood Activities: a. Eco-friendly bag making; b. Art Workshop; and c. Training on Cooperative Orientation with Coaching, Mentorship and Consultancy. These aim to establish a sustainable livelihood on Eco-Bag production run and managed by PWDs and to train them on establishing a cooperative. This training was held last May of 2021. The main activities for Phase 1 are all preparatory in developing a prototype design of hand-made designed eco-bag and eventual production of chosen design for mass production by the PWDs members of CNPWDA. The workshop venue and meals of the participants were shouldered by the CNSC-CBPA, while the training/workshop costs (honoraria and materials) were taken care of by Project Inclusion Network. CN-PDAO was responsible in identifying and recruiting the participants and the resource person of the workshop.

Phase 1. Training on Livelihood Activities: Eco-friendly bag making and Art

Workshop.









On May 19, 2023, the team conducted a follow up activity on the topic of Cooperativism for PWDs, in partnership with the CDA and Camarines Norte PDAO, one of the major findings in the TNA.




On May 27, 2022, they conducted a Training on Basic Entrepreneurship and Innovation with Coaching, Mentorship and Consultancy. The training was facilitated by Prof. Efren Alim Jr. of CNSC-College of Business and Public Administration (CNSC-CBPA). His coaching, mentorship and consultancies were enriched by different ideas that aided the queries of his participants. He discussed the Negosyante Formula: Dream, Belive and Achieve. He also said that few individuals dare strive for business success because of imaginary self-imposed barriers brought about by negative conditioning. We have lost the energy and the creativity of our early life, when we were not afraid to plan great adventures and mighty feats. He facilitated activities to help his participants in identifying their goals and their actions to achieve it.

This training was an extension of DOLE Integrated Livelihood Program for Persons with Disability under SUCCEED Project awarded Three Hundred Fifty Thousand Pesos (P350,000.00) worth of heavy equipment and materials needed in the project.




On October 14, 2022, The Training on Personnel/People Management and Leadership Skills with Coaching, Mentoring and Consultancy was held. Professor Jesse Opeña, the resource speaker, for the afternoon session tackled people management. He mentioned that people management is one of the most difficult areas of management nowadays. A good manager needs to anticipate any possible issue that might appear in their job in order to maintain team motivation and performance. People

management includes formal, procedural duties such as hiring, training, evaluating, and disciplining employees. Upon discussing this area, he emphasized the responsibilities in compensation, resources, wellness, conflicts, confidence and enthusiasm, as well as overcoming challenges. Management is needed in order to facilitate a coordinated effort towards the accomplishment of a goals using the available resources as much efficiently and effectively as possible. The succeeding topics are mostly about management of skills and leadership styles. He followed it with an activity that is called a development wheel.





November 24, 2023,the team organized the Business and Marketing Training for SUCCEED Program of CBPA: Basic Marketing Principles for Start-up Business. The preliminary training was led by Ms. Malyn Asay, CBPA Faculty, followed by Dr. Girly H. Naval, Extension Services Director of the said Education Institution and the trainer in the Training Design activity. She discussed the basic elements and key benefits of marketing relevance to business growth of the livelihood program of CNPWD Coop. Dr. Naval helped the participants define their target market, understand consumer behavior, and develop value proposition. Through these, they also discussed the key benefits of marketing which are to increase brand awareness and recognition, drive sales and revenue growth, enhance customer loyalty and retention and lastly, to improve competitiveness of their products. Along with these, marketing relevance to their livelihood program was also tackled. Some of these are identifying the best channels for promoting the programs, building a strong online presence through social media and other digital platforms, and tracking and measuring the effectiveness of their marketing efforts. All in all, the training was successful, and the participants were informed about the importance of marketing and how it can contribute to the growth of their livelihood programs.





The training is an avenue for the CNPWD Coop members to extend their hands in understanding and contributing to the attainment of a more sustainable livelihood program for PWDs here in Camarines Norte.

Moreover, the following are the upcoming events that may contribute to the livelihood trainings and seminars of Persons with Disability (PWDs) in the Camarines Norte: Training on Business Communication, Sales, Marketing and Negotiation Skills with Coaching, Mentorship and Consultancy; Training on Accounting/Bookkeeping with Coaching, Mentorship and Consultancy; Training on Financial Management and Financial Literacy with Coaching, Mentorship and Consultancy; Training on Pricing and Break-even Point Analysis with Coaching, Mentorship and Consultancy; and, any related activity/s, training/s and workshop/s with concern/s to the welfare of PWDs in the province.

5. RESULT AND DISCUSSION

The S.U.C.C.E.E.D program has had a significant impact on the economic empowerment of PWDs in the Camarines Norte region through the development and scaling up of community-based enterprises. Increased income generation for PWDs as one of the key outcomes of the program has been the creation of sustainable livelihood opportunities for PWDs. Since the launch of the S.U.C.C.E.E.D program in 2021, the college has supported the establishment of community-based enterprises led by PWDs. These enterprises have collectively generated income for over sixty (60) PWDs in the province, providing them with stable incomes and opportunities for skill development.

The community-based enterprises supported by the S.U.C.C.E.E.D program have also experienced significant growth in their sales and revenue. On average, the enterprises have reported a 35% increase in their annual sales over the past three years, demonstrating the viability and market demand for their products and services. This growth has enabled the enterprises to reinvest in their operations, expand their product lines, and further scale their impact.

The success of the S.U.C.C.E.E.D program has also led to increased community

engagement and visibility for the participating PWDs and their enterprises. The program has organized various events, workshops, and networking opportunities that have helped to raise awareness about the capabilities and contributions of PWDs in the local economy. This has, in turn, helped to challenge stereotypes and promote the inclusion of PWDs in the broader community.

Furthermore, the PWDs of Camarines Norte are now earning from 0 to 40% of every item that they produce. Also, they now have the S.U.C.C.E.E.D Livelihood Kiosk that serves as their showroom and production facility.

The S.U.C.C.E.E.D program has demonstrated the significant potential of CBEs in empowering PWDs and fostering their economic and social inclusion. The program's impact on income generation, sales growth, and community engagement has set a strong foundation for the continued scaling up and replication of this model in other provinces.

6. CONCLUSION

We believe that encouraging, and investing in PWD entrepreneurs can be an effective platform to achieve the following: (1) to change perceptions of the general public on the capabilities of PWDs, (2) to address barriers through a PWD-led participatory approach, and (3) to support labor market participation outcomes and poverty reduction initiatives, supported by the Philippine government and the international community through the Sustainable Development Goals. These issues were addressed by the different trainings conducted and those that will be conducted in the future.

7. RECOMMENDATIONS

The following recommendations are offered based on the activity accomplished during this program and the abovementioned conclusions:

1. In terms of implementation, this program is a five-year series of activities intended for PWD beneficiaries guided by the logical framework that should be conducted according to plan;
2. The program should be monitored and evaluated accordingly as required by the Office of Vice President for Research and Extension to ensure its continuity and productivity; and
3. There should be support from the institution. the continuous technical assistance from the college helped the program attain its main goal by augmenting and uplifting the lives of everyPWD beneficiaries in the province.

8. ACKNOWLEDGEMENT

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Economic Empowerment of Women through Entrepreneurship: A Case of MSMEs in Baguio City

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ABSTRACT

Women have the potential to provide significant social and economic benefits through entrepreneurship for themselves, their families, their communities, and their country. However, this potential is mostly overlooked with the persistent gender gap and lower labor force participation rate. Numerous constraints including human and social capital, lack of access to financing services, and social and cultural norms. and discriminatory legal framework impedes women from achieving economic equality. In response to these challenges, many women turned to entrepreneurship as a means to achieve economic empowerment. This is particularly evident in the Philippines' percentage of Filipinas in the *Micro*, *Small*, and *Medium Enterprises (MSMEs)* sector in the Philippines. Using primary data obtained from semi-structured interviews of six entrepreneurs in Baguio City, this paper discusses the state of economic empowerment of Filipina entrepreneurs before and after their venture into entrepreneurship in terms of the exercise of *agency* measured in (1) accumulation of power through decision-making participation and change in unpaid work; and (2) financial independence. The findings indicate that the accumulation of power is associated with heightened responsibility and power over people, increased control over time, better and more confident decision-making, and lessened unpaid work with some respondents preferring to maintain their current power levels. For financial independence, the respondents experienced increased control over their savings and business income, assets, and expenditures. However, limited progress was observed in terms of investment. Additional factors such as civil status, family dynamics, and duration of business operation also played a critical role in achieving financial independence.

Keywords: Economic Empowerment; Entrepreneurship; Women-owned MSMEs; Power; Financial Independence

1. INTRODUCTION

The persistent oversight of women's social and economic well-being has perpetuated an alarming economic gender gap, pushing women deeper into poverty (Muñoz-Boudet, Bhatt, Azcona, Jungsun Yoo, Beegle, 2020; Ortiz-Ospina and Roser, 2018; The World Bank, 2022). The World Bank's estimate of the gender pay gap's staggering $172.3 trillion cost, as reported in 2022, underscores the magnitude of this issue. In the Philippines, gender inequality is palpable in low female labor force participation and limited control over income (Asian Development Bank, 2014). Despite legislative efforts like the Magna Carta for Women (Republic Act 9710), the nation struggles to fully integrate women into economic development policies (Mehra, 1997).

Studies by Ciruela-Lorenzo, González-Sánchez, & Plaza-Angulo (2020), De Gobbi, Dhakal, & Hijazi (2005), and Senapati and Ojha (2019) highlight that women's participation in entrepreneurship can enhance their economic agency and decision-making power. However, various constraints facing women-owned micro-, small-, and medium-enterprises (MSMEs) perpetuated by inherent societal barriers (UNESCO, 2021; Xavier et al., 2015; Fairlie & Robb, 2009; Shamailan, 2016) threaten the economic empowerment of women.

The existing gender belief system perpetuated the unequal share in household and family responsibilities. According to Aldair, Guilkey, Bisgrove & Guiltiano (2002), 31% of Filipinas of working age were not able to enter the labor force in 2011 due to household responsibilities and family duties. In contrast, only three percent of men reported the same.

Financial constraints, including limited start-up capital, contribute to reduced business survival rates and profits (Fairlie & Robb, 2009; Coleman & Robb, 2009). In particular, Lazo (2015) notes that women entrepreneurs typically have smaller capital, amounting to Php 10,000 and below, reflecting a lower barrier to entry and lower value addition to the Philippine economy. Institutional barriers encompass regulatory hurdles, credit access, and social support deficiencies (World Bank, 2016). According to Ta-asan (2023), a majority of women-owned MSMEs reported lack of access to funding as an issue in proceeding with their business operations. This was supported by several studies by Bragée & Bay (2006) De Gobbi, et al., (2005), and Senapati & Ojha, (2019) who have highlighted that women entrepreneurs prefer to use microfinance to capitalize their operations. This lack of access in financial resources ascertains the discontinuation, lower survival rates, profits, employment, and sales of women-owned businesses and firms (Boden & Nucci, 2000; Du Rietz & Henrekson, 2000; Watson, 2003; Fairle & Robb, 2009).

Investing in the economic empowerment of women is also a direct investment in inclusive economic growth, poverty reduction, and gender equality. However, with the lack of similar studies in the Philippine context, it is imperative to undertake an in-depth examination of the economic empowerment of Filipina entrepreneurs within the Philippines. This research seeks to underscore the pivotal role played by women entrepreneurs in narrowing the gender gap, shedding light on the necessity for women to surmount socio-cultural constraints and economic obstacles on their path to achieving economic empowerment. Furthermore, this study endeavors to bridge the gap of scarce literature on the subject. By doing so, it aims to elucidate how diverse economic indicators can incorporate gender-related considerations, identify

areas requiring development, and underscore the urgency of implementing pragmatic policy interventions. This investigation contributes to the international discourse on women's economic empowerment and its significance in fostering gender equality and sustainable economic development.

Furthermore, this qualitative study delves into the role of entrepreneurship as a catalyst for women's economic empowerment, employing purposive sampling and semi-structured interviews to gain comprehensive insights. It draws upon existing frameworks like those by Buvinic et al. (2020), Senapati & Ojha (2019), and Buvinic & Furst-Nichols (2015), with a focus on the "exercise of agency" variables outlined in Figure 3.1. Notably, the research does not investigate other potential influencing factors in women's economic empowerment. While it takes a holistic approach to the MSMEs sector, the findings are not generalizable across industries, constituting a key limitation. The study concentrates on Baguio City, acknowledging the potential impact of unexplored variables and alternative economic opportunities. Limited prior research in the Philippine context necessitates reliance on international publications, such as those by Buvinic et al. (2020), Senapati & Ojha (2019), and Buvinic & Furst-Nichols (2015). Furthermore, the study's sample selection criteria, aligned with the Department of Trade and Industry's data, may impact the data's richness due to random selection.

However, amid these critical observations and the recognized significance of women's economic empowerment, there remains a pressing need to pinpoint and address the specific challenges that hinder women-owned MSMEs in the Philippines. This study explores how entrepreneurship is a tool for women's economic empowerment. Specifically, it answers the following questions:

1. What was the state of economic empowerment of Filipina entrepreneurs before their ventures into entrepreneurship?;
2. How did the state of economic empowerment with regard to the accumulation of the power of Filipina entrepreneurs change with their venture into entrepreneurship; and
3. How effectively does entrepreneurship contribute to the economic empowerment of Filipina entrepreneurs in terms of their financial independence

2. RELATED LITERATURE

2.1. Women Empowerment

Early empowerment theories focused on the oppressed gaining power by overcoming domination. However, the term "empowerment" gained prominence in international development in the late 1980s, particularly through the feminist movement in the Global South (Calvès, 2009; Fischer, 2005; León, 2003; Sardenberg, 2008; Wise, 2005).

Kabeer's (1999, 437) influential definition of women's empowerment, as the "ability to make strategic life choices," emphasizes the importance of women's decision-making abilities. This definition aligns with the idea that empowerment is a process where individuals gain the capacity to make significant life decisions and act upon them (Helling, Serrano, and Warren, 2005; Mosedale, 2005). It implies a shift from being disempowered, or denied choice, to reclaiming power and control over one's life. Other definitions, such as Narasimhan's (1999, p. 35) concept of an "expanded capability" for women to control their

circumstances, reinforce the notion of empowerment as a means of enhancing women's agency. Duflo (2012) emphasizes how women's empowerment can improve their access to the benefits of development, connecting it to participation in political and economic activities.

Empowerment, as understood in these definitions, implies a transformative change in women's lives, encompassing both the process of change and its outcomes. This perspective aligns with feminist literature that views women's empowerment as both a journey and a destination. The importance of women's empowerment is widely recognized in international development (Duflo, 2012; Sardenberg, 20018; Senapati & Ojha, 2019). It is considered fundamental to achieving gender equality, which is viewed as a key element for creating a peaceful, prosperous, and sustainable world (United Nations, 2020). Gender equality includes various dimensions such as equal access to education, universal healthcare, decent work, and participation in political and economic decision-making.

2.2. Exploring gender bias in economic inequalities

There is an obvious persistence of gender inequality on a global scale, primarily focusing on income disparities between men and women . This inequality is particularly pronounced in regions with low incomes, such as East Asia, the Pacific, South Asia, and Sub-Saharan Africa (Muñoz-Boudet, Bhatt, Azcona, Jungsun Yoo, Beagle, 2020; World Bank, 2020b). The Poverty and Shared Prosperity 2020 report, along with other sources, underscores the prevalence of women among the world's impoverished population, especially young girls.

A comprehensive survey conducted by the World Bank across 89 countries reveals alarming statistics, indicating that in the 25-34 age group, there are 122 women living in poor households for every 100 men. Furthermore, a significant proportion of impoverished households are characterized by male earners, children, and non-income earning spouses, contributing to the challenging living conditions faced by many women (Muñoz-Boudet, Buitrago, De La Briere, Newhouse, Rubiano Matulevich, Scott, & Suarez-Becerra, 2018).

In the Philippines, there is a notable wage gap of 22% and an income gap of 31% in 2021. The gender pay gap investigation, drawing from data in the July 2018 Labor Force Survey, reveals a consistent 4.84 % pay gap between men and women, translating to lower daily earnings for women (Engcong, Lim-Polestico, Yungco, & Liwanag, n.d.). Despite educational achievements among women, equitable occupational opportunities remain elusive.

Economic inequality extends beyond income disparities (Ortiz-Ospina & Rozer, 2018), encompassing women's overrepresentation in low-paying jobs, underrepresentation in senior positions, and limited ownership of assets and property rights. Women also face challenges in influencing crucial household decisions, further perpetuating economic inequality, particularly in mid-to-low-income households (Muñoz-Boudet et al., 2020; Muñoz-Boudet, et al., 2018; Ortiz-Ospina & Roser, 2018; World Bank, 2020b; World Economic Forum, 2021).

There is also a persistent gender disparities in labor force participation, exacerbated by the challenges of unpaid work (Asian Development Bank, 2014; PSA, 2022), which hinder women's engagement in paid

employment. Household and family responsibilities often hinder women's entry into the labor force, leading to lower labor force participation rates and higher unemployment rates among women compared to men.

Additionally, the concept of women's empowerment is discussed, emphasizing its ambiguity and the lack of a universally accepted definition. This ambiguity hampers the collective pursuit of gender equality and contradicts international development goals (Bebbington, Lewis, Batterbury, Olson, and Siddiqi, 2007; Hennink, Kiiti, Pillinger, Jayakaran, 2012; Sardenberg, 2008). The text emphasizes the importance of recognizing and empowering women as an essential component of a nation's human capital, crucial for poverty reduction and achieving inclusive growth, calling for the integration of women's participation in economic activities into international development agendas.

2.3. Economic Empowerment of Women

The concept of women's economic empowerment, as defined by Golla, Malhotra, Nanda, & Mehra (2011), encompasses gaining access to resources and agency. In essence, it involves women having control over assets, income, and other economic resources to effectively manage risks and improve their economic situations. Similar definitions by De Gobbi, Dhakal, & Hikazi (2020) emphasize the importance of women's access to and control over savings, credit, and decision-making in economic activities and household matters.

Women's economic empowerment is a means of promoting gender equality and providing women with resources and opportunities across various sectors. Kapoor (2019) elaborates on four dimensions of women's economic empowerment, including the *power within*, *power to*, *power with*, *and power over*. Senapati & Ohja (2019) identify income generation, enterprise decision-making, and self-employment generation as key variables in determining women's economic empowerment. Other factors such as economic efficacy, self-confidence, access to economic resources, knowledge and skills for business growth, and legal and environmental support are also essential, as highlighted by Gurjar and Wasnik (2015). The United Nations Foundation's definition synthesizes these various dimensions, portraying women's economic empowerment as both a process and an outcome achievable through the exercise of agency (Buvinic, O'Donnell, Knowles, & Bourgault, 2020). This definition aligns with the work of Kabeer (1999) on women's empowerment, emphasizing that access to resources is essential for empowerment as it enables individuals to make strategic life choices.

Women's empowerment is intrinsically linked to gender equality, poverty alleviation, and inclusive growth (Ciruela-Lorenzo et al., 2020). Duflo (2012) underscores the reciprocal relationship between women's empowerment and economic development, as empowering women can help address economic inequalities and promote sustainable poverty reduction. Economic development, in turn, provides women with more opportunities to exercise their rights, including access to education and improved legal rights.

The dimensions of women's economic empowerment can be categorized into three key elements: resources, agency, and achievement (Kabeer, 1999; Kabeer, 2005). Resources encompass material, human, and social resources that are essential for empowerment. Agency involves the ability to make and act on strategic life choices, challenging existing power dynamics. Achievement represents the realization

of potential through the combination of resources and agency. These dimensions are interconnected, and improvements in one dimension can lead to enhancements in others. For instance, closing the gender gap in educational attainment can create more economic opportunities for women, but these opportunities may remain unrealized if resource access remains restricted.

2.4. Entrepreneurship

Republic Act 8289, known as the Magna Carta for Small Enterprises, defines MSMEs in the Philippines as business activities with a total value not exceeding 60,000,000 pesos. The Philippine Statistics Authority (PSA) classifies MSMEs based on employment levels, with micro-enterprises having fewer than 10 employees, small enterprises having 10 to 99 employees, and medium enterprises having more than 100 employees (Philippine Commission on Women, 2022). These MSMEs play a vital role in the Philippine economy, comprising 35.7% of the GDP in 2018 and providing employment for 5.7 million individuals, accounting for 63.2% of the total labor force in the same year.

Furthermore, 99.5% of all registered enterprises in the country are MSMEs, with a significant portion (55.8%) being women-owned or operated (Philippine Commission on Women, 2022). In the Cordillera Administrative Region (CAR), MSMEs constitute 75.6% of total employment, with 80,527 workers employed, compared to large establishments employing only 24.4% of the region's workforce (Agoot, 2022).

Despite their potential, MSMEs face various barriers. These challenges include limited access to capital, low profitability, and a high rate of discontinuance (Global Entrepreneurship Monitor, 2014). Additionally, a lack of entrepreneurship education in schools, coupled with misconceptions about business ownership, hinders aspiring entrepreneurs (Mauchi et al., 2014). Women entrepreneurs encounter specific challenges, including financial difficulties, competition, work-family balance, and gender biases in the finance sector (Mauchi et al., 2014; Archana, 2018).

Institutional constraints encompass a range of factors such as business permits, credit access, taxation, investor support, contract enforcement, and insolvency resolution, as defined by the World Bank (2016). A critical determinant of women's economic empowerment is the prevailing legal framework. Discriminatory practices in the business environment pose a substantial obstacle to women entrepreneurs. Government neglect (Obi, Okechukwu, & Egbo, 2017), significantly impacts the capabilities of women entrepreneurs, particularly in rural areas. Government initiatives, such as improved childcare for single mothers, offer opportunities for women to pursue entrepreneurship (Camelo-Ordaz, Diánez-González, & Ruiz-Navarro, 2016). Discriminatory legal provisions reinforce gender inequalities and social norms.

Women's economic empowerment is a fundamental right, but it is often hindered by economic abuse, which restricts women's ability to access and control economic resources (Ali, M., Ali, L., Badghish, & Soomro, 2021; Holloway, Niazi, & Rouse, 2017; Postmus, Hetling, & Hoge, 2015). This form of abuse is pervasive and can lead to dependency on abusive partners, making it difficult for survivors of intimate partner violence (IPV) to break free from their abusers (Ali et al., 2021; Sanders & Schnabel, 2006). Limited

educational opportunities, employment options, asset ownership, control over finances, and inheritance rights further constrain women's economic autonomy.

2.4.4. Enablers

Government institutions play a significant role in fostering the development of MSMEs in the Philippines. The Bureau of Small and Medium Enterprise Development collaborates with the national government and academia to support MSMEs. In the Cordillera region, the Department of Trade and Industry (DTI-CAR) actively assists MSMEs, with a focus on promoting investments in agri-business and tourism (Gasingan, 2022). Additionally, programs like the Kapatid Mentor ME initiative, offered by DTI-CAR and the Philippine Center for Entrepreneurs, provide mentorship to enhance the entrepreneurial capacity of MSMEs (Dar, 2022; DTI, 2016).

Entrepreneurship has the potential to empower women economically. Research by Senapati and Ojha (2019) showed that women entrepreneurs experience increased social empowerment, greater participation in household decision-making, and access to bank accounts. However, challenges related to unpaid domestic work and traditional gender roles persist. In Colombia, Ciruela-Lorenzo et al. (2020) found that women who are victims of armed conflict turn to entrepreneurship out of necessity. Research by De Gobbi, Dhakal, & Hijazi (2005) revealed that women engaged in microenterprises in Pakistan and Nepal experience increased economic empowerment. They have more control over their financial and economic activities and make significant contributions to household finances, particularly in areas such as education, food, and healthcare. Entrepreneurship serves as a pathway to economic independence for these women while benefiting their families and communities.

2.5. WEE through Entrepreneurship

The economic empowerment of women is not only a matter of gender equality but also a crucial driver of inclusive economic growth (Calvès, 2009; Golla et al., 2011; Mehra, 1997; Senapati & Ojha, 2019). Research has consistently shown that women's full participation in the labor market could add as much as 26 % to the global annual GDP by 2025 (Fleischman, 2018). Empowering women across various domains of life, including economic, social, political, health, and education, can lead to more equitable and prosperous societies.

Entrepreneurship has emerged as a primary avenue for enhancing women's economic empowerment. It allows women to increase their monthly income independently, reducing their reliance on male family members (Al-Dajani & Marlow, 2013, Ciruela-Lorenzo et al., 2020; Duflo, 2012; Holloway et al., 2017; Kabeer, 2012; Kapoor, 2019; Sanders & Schnabel, 2006; Senapati & Ojha, 2019; Sirivunnabood & Liao, 2021). Micro-entrepreneurship, in particular, has proven effective in enhancing various social variables, such as income, participation in domestic decision-making, credit management, unpaid work, and self-confidence.

While entrepreneurship can be a powerful tool for women's empowerment, the primary motivations for women entering entrepreneurship often stem from patriarchal norms, including the desire for improved family welfare and better work-life balance. Many women entrepreneurs find themselves in the informal

economy (Al-Dajani & Marlow, 2013), limiting their potential for poverty alleviation despite its positive impact on their aspirations.

Economic empowerment is a multidimensional process encompassing three key dimensions: resources, agency, and achievement (Duflo, 2012; Hennink et al., 2012; Kabeer, 1999; Muñoz-Boudet, et al., 2018). Resources refer to the opportunities that enhance women's access to economic resources like capital, human, social, and material assets, including contextual and household factors. The allocation of these resources is influenced by prevailing social norms and values.

The exercise of agency, a key outcome indicator of empowerment, involves women taking control of their access to resources, participating in decision-making processes, and contributing positively to their communities (Buvinic & Furst-Nichols, 2015; Buvinic et al., 2020; Mallikarrjuna & Naik, 2014). This includes control over household expenditures, savings and investments, productive assets, financial independence, reduced stress, leadership roles, self-confidence, and self-esteem.

Achievement, the ultimate outcome of empowerment, is the result of the interplay between resources and agency (Kabeer, 1999). It signifies women's capacity to pursue their desired way of life, achieving their valued values of being and doing. Measuring achievement is vital for understanding regional and temporal disparities, highlighting persistent gaps in the degree of achievement.

In assessing the potential of entrepreneurship in women's economic empowerment, several key indicators are examined. These indicators include financial independence, participation in decision-making, and changes in unpaid work. These measures align with the concept of economic empowerment as a process and are supported by existing frameworks and definitions of economic empowerment from various scholarly sources.

2.5.1. Financial independence

Economic abuse in intimate relationships necessitates women's economic and financial empowerment (Ali, M., Ali, L., Badghish, & Soomro, 2021; Holloway, Niazi, & Rouse, 2017; Postmus, Hetling, & Hoge, 2015). Financial autonomy, involving control over personal income, financial decision-making in family and business matters, and contributing to family income, is a visible aspect of women's economic empowerment. Additionally, the study recognizes the importance of asset ownership and decision-making power over assets, regardless of external pressures.

2.5.2. Accumulation of power

Accumulation of power, following Kabeer's definition of empowerment, gauges women's involvement in both business and household decisions, considering enhanced confidence, self-esteem, and skills. The study also measures changes in unpaid work as an indicator of women's control over leisure time and economic well-being, based on their ability to allocate time. Research aligns with Kapoor (2019), Madan, Gulyani, & Benson (2014), and Ciruela-Lorenzo et al. (2020), highlighting women's empowerment through decision-making and participation

3. FRAMEWORK

This chapter outlines a framework for analyzing the impact of entrepreneurship on women's economic empowerment. Drawing from the UN Foundation and the Center for Global Development's Women's Economic Empowerment (WEE) framework, it defines economic empowerment as a process involving equal access to and control over resources. To enhance this framework, it incorporates access to economic resources as a prerequisite for economic opportunities, examining how resources facilitate women's enterprise development. The framework also considers individual and community capabilities gained through entrepreneurship, affecting women's agency. It further explores factors related to financial independence and accumulation of power as determinants of agency, shedding light on how entrepreneurship empowers women economically, improving their personal and household well-being.

The presented framework (See Figure 3.1) aligns with Kabeer's (1999) conceptualization of empowerment as an agency-based process. This process involves strategic life choices and decision-making, with three interconnected dimensions: resources, agency, and achievement. Resources encompass access to economic assets, agency involves decision-making, and achievement signifies the realization of economic empowerment. The framework includes inputs, such as economic resources, contextual and household factors, shaping women's economic opportunities. Economic resources involve material, human, and capital assets required for entrepreneurship. Contextual factors pertain to formal and informal institutions, while household factors encompass gender-related disparities in resource allocation, unpaid work, and women's lower status.

The primary focus is on entrepreneurship as the key economic opportunity for women. Direct outcomes of entrepreneurship include individual and community capabilities, encompassing knowledge, self-confidence, business skills, social status, and networks. The exercise of agency, considered an intermediate outcome, measures women's behavior change due to their capabilities. It includes financial independence (control over finances, savings, investments, and assets) and accumulation of power (participation in decision-making and changes in unpaid work).

The ultimate outcome is women's economic empowerment, involving access to resources and agency. Feedback loops exist in the framework, indicating that women's economic empowerment leads to improved economic opportunities through entrepreneurship, while changes in contextual and household factors also respond to women's empowerment. However, the framework highlights the potential for a reinforcing cycle of "gender inequality traps" or progress.

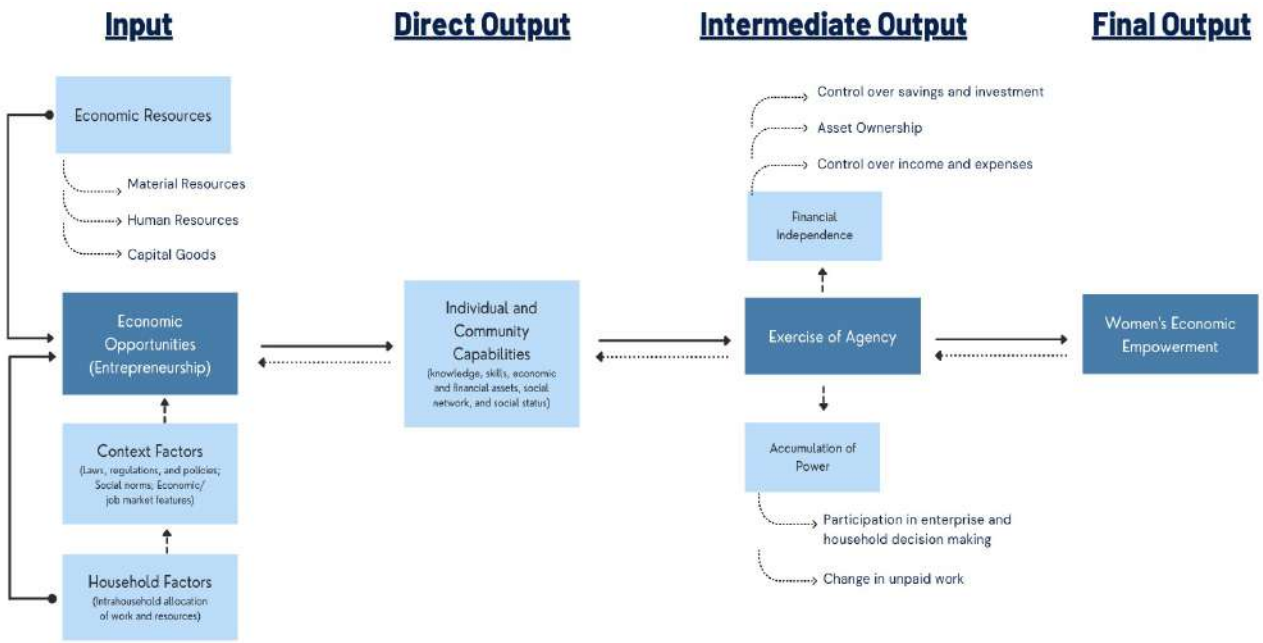


Figure 3.1. Women's Economic Empowerment Framework with Entrepreneurship as Primary Input

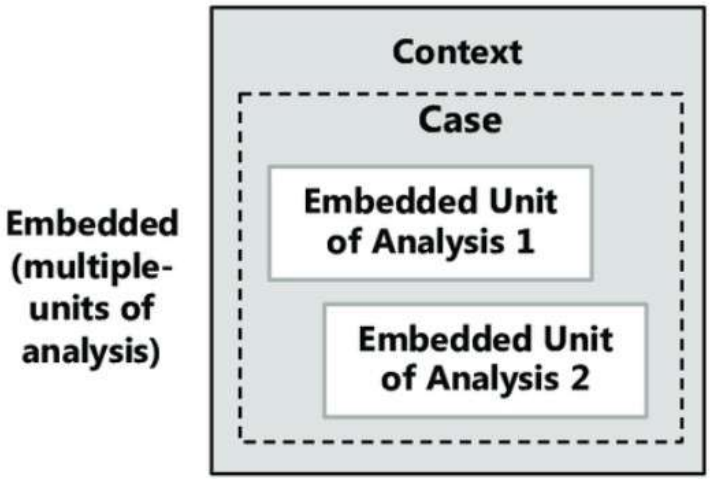
4. METHODOLOGY

4.1. The researchers adopted a case study research design to investigate contemporary real-life phenomena via a detailed analysis of events or conditions (Crowe et al.,2011; Zainal, 2007; Yin, 2009). In particular, the study focuses on the different in terms of financial independence and power that allow women entrepreneurs to exercise their agency while taking into account contextual, household, and economic factors that may affect their individual capabilities **(See Figure 3.1)**.

A case study design creates an avenue for the researchers to support deeper and more detailed examinations when there is "little to no control" over who, what, and where questions (Rowley, 2002; Yin, 1994, p.9). According also to Yin (1994, p. 13), the two elements of a case study [1] investigating contemporary phenomena within real-life context, and [2] boundaries between phenomenon and context are not clearly event makes the intrinsic nature of this research is that the events are never replicated but an investigation of the lived experiences of Filipina entrepreneurs.

This methodology provides an ability to explore a phenomenon through different lenses, criticisms of the robustness of the interpretation of its results remain (Lucas et al., 2018; Rowley, 2002; Yazan, 2015; Zainal, 2007). For the purpose of this study, the researchers opted for an embedded single-case design over the four types of designs namely; [a] holistic single-case design, [b] embedded single-case design, [c] holistic multiple-case designs, and [d] embedded multiple-case designs (Yin, 2022) .

Figure 4.1. Embedded single-case designs for multiple units of analysis (Yin, 2002)

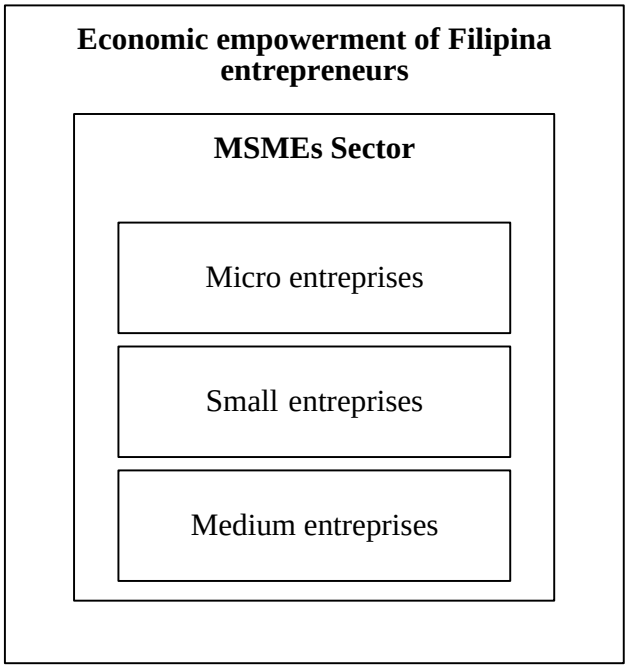


Relating to Yin (2002), these are the five rationales for choosing a research design. First, the economic empowerment of Filipino entrepreneurs is a critical case contributing to gender-sensitive and inclusive policies and theory building due to the scarcity of similar studies in the Philippine context. In In addition, *economic empowerment*, particularly for MSMEs entrepreneurs, is a new subject in the country given the limited number of women-owned SMEs, or WSMEs in the country according to the research on Women and Entrepreneurs by the Sydney Southeast Asia Centre. This presents an opportunity for a previously

unexplored or, in Yin's [2002] words, *"revelatory case"*. As previously mentioned, the nature of the study examines the lived experiences of Filipina entrepreneurs. Consequently, the findings can contribute to the formulation of sociocultural and economic policies directed at addressing the gender inequalities experienced by women beyond the context of entrepreneurship. By focusing on a single-case study conducted at different time periods, particularly on the second sub-research question, the research aims to provide a comprehensive understanding of the evolution of Filipina entrepreneur empowerment over time.

The study is aligned with these rationales. The table below shows the proposed research design:

Figure 4.2. Embedded single-case study design



This case focuses on the economic empowerment of Filipina entrepreneurs within the MSME sector and it allows for an analysis of the effects of entrepreneurship on the empowerment of women in terms of their exercise of agency, as proposed in the statement of the problem. Furthermore, this study demonstrates the importance of women in closing the gender gap, contributing to the formulation of evidence-based results for gender-sensitive and inclusive policies. Additionally, the study attempts to bridge the gap by contributing to the lacking literature on the economic empowerment of women in the Philippines.

The study utilized primary data collection method through a semi-structured interview guide for the sub-research objectives crafted for Filipina entrepreneurs. This approach enables researchers to obtain rich qualitative, open-ended data exploring the lived experiences of the participants [DeJonckheere & Vaughn, 2019; Newcomer, 2015, pp. 492–505]. The answers gathered from the first sub-research objective serve

as a basis for assessing the effectiveness of entrepreneurship by comparing the period before the operation of the business operation and a year and/or beyond its full operation. In addition, for the second and third research sub-objectives, the researchers evaluated the indicators of exercise of agency, namely *accumulation of power* and *financial independence*. The relevant data gathered were used to examine the differences in the identified variables under the exercise of agency, determining whether the state of the economic empowerment of women was effectively changed after this venture.

5. RESULTS AND DISCUSSION

5.1. State of Economic Empowerment Before Business Venture

The researchers attempt to contextualize the state of economic empowerment of women before their venture into the business world. This examines the contributing factors that influence the economic opportunity available to women. The study also finds that the motivation of most of the respondents to venture into entrepreneurship is due to financial constraints. Evidence suggests that an increase in income alongside better work-life balance and pursuing their passion are the main motivators for the respondents. This is aligned with various research findings on women entrepreneurs. In particular, Al-Dajani & Marlow [2013] suggest that the primary motivation for women's venture in entrepreneurship remains largely patriarchal in nature, such as improved family welfare, and better work-life balance. Kapoor [2019] also noted that entrepreneurship allows women to increase their monthly income with little to no reliance on their husbands.

5.1.1. Accumulation of Power

The power of the respondents in terms of decision-making before they venture into entrepreneurship varies depending on (1) civil status; and (2) family dynamics. Married women tend to have more influence in household decision-making, particularly when they have supportive husbands. Supportive spouses, as emphasized by Respondents C, D, and E **(See Table B1)**, enable women to actively contribute to household decisions, prioritizing the family's well-being. Discrimination within the household is less prevalent, as observed by Respondent C, who advocates for community support to encourage male partners to back their entrepreneurial wives.

In contrast, unmarried women exhibit lower levels of participation in household decision-making. Widowed women, however, often assume the highest authority within their families, impacting household decisions significantly. Similar factors affect women's power regarding unpaid work and time allocation, with marital status and family dynamics playing pivotal roles. While married women commonly share household and childcare responsibilities, this division is often by choice rather than obligation. Nevertheless, healthy family dynamics result in a more equitable distribution of responsibilities **(See Table B1)**.

The study also identifies a link between women entering parenthood and interruptions or reductions in their careers, aligning with Sirivunnabood and Liao's findings (2021). In particular, some of the respondents have stopped working in their previous careers because they had children. This is more prominent with married respondents who divide household work with their husbands. Overall, household

factors influences women's empowerment, specifically their decision-making authority and allocation of time. These findings underscore the complex interplay between entrepreneurship, marital status, family dynamics, and gender roles in shaping women's empowerment within households.

5.1.2. Financial Independence

Variations emerged in how respondents allocated their income. Married individuals, such as Respondents A, C, D, and E **(See Table B2)**, often directed their income toward the household budget. In contrast, Respondent B, who was not married, made different financial choices. Family dynamics also played a significant role in income allocation. Respondent E, as the family's breadwinner, assumed responsibility for family debts and siblings' education, while Respondent B became a breadwinner after the loss of her parents, supporting both herself and her siblings.

Moreover, four out of six respondents lacked personal assets prior to their entrepreneurial ventures, with Respondents A and B acquiring assets through inheritance **(See Table B2)**. While most had personal savings accounts, these funds were primarily earmarked for household expenses, with limited intentions for personal use. The study highlights the substantial impact of individual occupation on economic resources, yet contextual and household factors constrained respondents from utilizing their income for personal benefit, emphasizing their commitment to contributing to household funds.

5.2. Accumulation of Power

This section focuses on women's participation in both entrepreneurial endeavors and household decision-making, in line with Kabeer's framework (1999). It underscores the positive impact of entrepreneurship on women's confidence, self-esteem, and socio-economic status, particularly in career development and life decisions.

Table B3 reveals that four out of six respondents reported an increase in their responsibilities and authority as a result of their entrepreneurial pursuits. This aligns with Senapati and Ojha's findings (2019), indicating that women entrepreneurs experience greater social empowerment. The respondents acknowledged that entrepreneurship entails a broader scope of responsibilities, encompassing not only their families and employees but also their entire communities. Respondent C emphasized her commitment to empowering not only her business associates but also her entire community, taking pride in inspiring others to achieve economic security by sharing her business knowledge.

Moreover, the data demonstrates an enhanced control over time, as these women can determine their schedules according to their preferences. However, Respondents A and B noted the continuous demands of running a business, emphasizing the need for constant attention. This flexibility in time management enables them to attend to childcare and household chores before commencing work, fostering a healthier work-life balance through the opportunity to take breaks as needed.

5.2.1. Decision-making participation

The decision-making ability and confidence of 3 out of 6 **(See Table B4)** entrepreneurs improved noting that they are able to be more confident in decision-making because of their experience in running their

business. This can also be attributed to having more control over their household chores, implying it's because they now think that their own work is their own responsibility and that she is no longer just waiting for the wage. Now that she is able to control her time, she is able to decide better for herself and the business.

Additionally, the rest of the respondents said that their ability in decision-making stayed the same or they always tried to compromise with their partner **(See Table B4)**. Compromising with their partners enables them to think and reflect more on their decisions. This for them, is more of trying to get more from the situation since and allows them to strengthen their confidence that they are doing the right thing when it comes to running their business and other aspects of their lives.

5.2.2. Unpaid Work

When it comes to unpaid work, 4 out of 6 of the respondents noted that there is less unpaid work on their end (See Table B5). What we can get from their responses is that their lessened unpaid work is due to the fact that they are now able to have control of their time and their time in running their business. They are able to hire people to do their unpaid work for them which results in more time in being able to attend to their business and have more time for their family. This tells us that there is a positive impact on the business since they are now outside the stereotypical household wives, now businesswomen who are empowered to do more.

On the other hand, two of the six respondents answered that their unpaid work remained the same (See Table B5). However, this is not because they are not able to hire people to do their unpaid work, instead, it is because of personal decisions that they think is more beneficial for them. This is also because of they have more control over their time which means they can allot some time to do household chores and other unpaid work.

5.3. Financial Independence

The third research question investigates how effective entrepreneurship contributes to the financial independence of Filipina entrepreneurs. It is one of the indicators of the exercise of agency that measures the achievement of economic empowerment of women. To contextualize, the researchers discussed the change in the financial independence of the respondents after their venture into entrepreneurship through the following variables.

5.3.1. Control over savings and investments

All respondents experienced an increase in control over their savings generated from their entrepreneurial ventures, regardless of their business type. However, only 2 out of 6 respondents refrained from making investments post-enterprise initiation, focusing instead on savings and business growth **(See Table B6)**. The remaining 4 out of 6 respondents made personal investments, with equipment and financial markets being the primary avenues. Notably, investments in equipment and machinery were typically reinvested in the business.

The manner in which control over savings is exercised varies among respondents **(See Table A6)**. For instance, Respondent C illustrated her increased control by using personal savings for various purposes, including purchasing for her children, dining out, and reinvesting in her business. Micro-enterprises faced challenges in separating personal and business accounts, primarily because most of their initial capital came from personal funds. Conversely, small and medium-sized enterprises effectively utilized business accounts for equipment purchase and reinvestment, owing to their longer operational history.

The duration of business operation seems to influence this pattern, with micro-enterprises focusing on expansion and relying on family contributions instead of loans from banks. Another common theme is the establishment and separation of bank accounts **(See Table B6)**. Some respondents lacked personal bank accounts before venturing into entrepreneurship, while others had difficulty segregating household and personal spending. Presently, all respondents allocate a portion of their business income to personal savings accounts, a practice resembling findings from Senapati and Ojha's (2019) study, indicating that women entrepreneurs are more socially empowered, thereby gaining access to bank accounts and exercising control.

While most respondents manage both personal and business accounts independently, two chose not to open separate business accounts. One respondent shared an account with her husband, while another opted to wait until a certain income threshold was reached before establishing a dedicated personal savings account for asset acquisition.

In terms of investments, 4 out of 6 respondents allocated disposable income to various forms of investment. For some, purchasing equipment was considered an investment channeled back into the business, while others explored financial market investments such as UTF. This aligns with De Gobbi et al.'s (2020) assertion that women's economic empowerment is reflected in their decision-making roles, particularly regarding investments. In these cases, the respondents independently made decisions regarding the allocation of their business income for investments, highlighting their autonomy in this aspect.

5.3.2. Asset Ownership

The lack of women's access to and control over assets hinders their participation in decision-making and limits economic opportunities. Studies by Klugmnan et al. (2017) and Ortiz-Ospina and Rozer (2018) emphasize gender disparities in asset ownership, particularly in land ownership. Enhancing women's ability to own and control assets is crucial for addressing these disparities.

Ciruela-Lorenzo et al. (2020) define economic empowerment as the control and benefit derived from assets, income, and economic resources, enabling women to manage risks and improve their economic situation. To measure economic empowerment, it's essential to assess whether women can own and control personal assets through entrepreneurship. Data from interviews revealed that 5 out of 6 respondents were able to acquire personal assets after starting their businesses, although many of these assets were also used in their businesses **(See Table B7).**

This pattern is common in small and medium enterprises, where profitability allows for investments in assets that contribute to business growth. Government support, such as from DOST and DTI, further aids small enterprises in acquiring additional assets. However, some respondents, like one who held joint assets with her husband, did not acquire personal assets independently, even after starting a business. Micro-businesses, with stable capital levels, gradually expand. The duration of operation significantly influences respondents' ability to own and control personal assets and the support available to them for business expansion **(See Table B7)**.

5.3.3. Control over income and expenditures

The persistent income gap is a significant challenge in achieving economic equality, and it serves as a primary motivation for many respondents' entry into entrepreneurship, as noted by Barroso & Brown (2021), Engcong et al. (n.d.), Ortiz-Ospina & Roser (2018), Muñoz-Boudet et al. (2020), Muñoz-Boudet et al. (2018), and Semega et al. (2020). Control over income and expenditures is a key indicator of women's economic empowerment, as highlighted by Buvinic et al. (2020), Ciruela-Lorenzo et al. (2020), and Senapati & Ohja (2019).

One prominent theme is the increase in household financial contributions resulting from enhanced income due to business sales **(See Table B8)**. Entrepreneurship enables women to augment their monthly income independently, reducing reliance on spouses, according to Kapoor (2019). Senapati & Ojha (2019) also affirm that micro-entrepreneurship leads to income growth and improvements in various social aspects. Nevertheless, Kantor (2003) cautions that income from entrepreneurship may still be insufficient to shift intra-household power dynamics, suggesting that family dynamics play a vital role. Decision-making participation is influenced by the relationships between spouses and family dynamics. Supportive family relationships and entrepreneurship can boost confidence and leadership skills, empowering women to participate actively in household decisions.

Another theme is the allocation of additional income, with respondents not only contributing to household finances but also to other expenses, such as leisure activities and sponsoring scholars' education **(See Table B8)**. Women entrepreneurs significantly contribute to household finances, particularly in education, food, and healthcare, as observed by De Gobbi et al. (2005) in Pakistan and Nepal. Small and medium enterprises are more likely to allocate income to these expenses, with micro-entrepreneurs often reinvesting earnings into their businesses.

One respondent's income allocation was not specified, but it is inferred to be reinvested in the business **(See Table B8)**. Small and medium enterprises are more inclined to support various expenses, exemplified by Respondent C's support for scholars beyond her own children, while micro-entrepreneurs like Respondent B tend to prioritize business reinvestment.

6. CONCLUSION

This study underscores the pivotal role of entrepreneurship in advancing the economic empowerment of Filipina entrepreneurs in Baguio City. It examines the underlying factors shaping economic opportunities and their impact on women's pursuit of entrepreneurship and empowerment.

6.1. State of economic empowerment of Filipina entrepreneurs before their venture into entrepreneurship.

Analyzing economic empowerment pre-entrepreneurship, researchers linked these factors to agency indicators. Accumulation of power and financial independence were influenced by marital status and family dynamics. Married respondents generally had more decision-making power, often dependent on spousal support. They also shared household responsibilities. Personal finances, although controlled by respondents, were mainly allocated for household expenses, as they often served as primary breadwinners.

Two common motivators for entrepreneurship emerged: financial constraints due to insufficient previous income to meet household needs, and a passion-driven desire to start businesses, as exemplified by Respondents A and B's zero-waste ventures.

6.2. Accumulation of Power

Entrepreneurship has empowered these women with increased responsibility and influence, not only over themselves but also over employees and their communities. They now have more control over their time, allowing flexibility to balance personal roles as individuals, mothers, wives, and businesswomen. However, they acknowledge the 24/7 nature of business. This experience fosters confidence in business and life decisions, though some still seek compromise with their partners. Regarding unpaid work, four out of six have reduced their workload by hiring help, while others share it with their partners, resulting in similar unpaid responsibilities.

6.3. Financial Independence

All respondents reported increased control over savings and refrained from making additional investments post-entrepreneurship. In addition, most respondents gained ownership and control of personal assets, albeit predominantly allocated for business operations.These women experienced augmented income and control. Their budget allocation primarily covered household expenses, but some indulged in recreational activities with family or supported charitable work due to newfound financial freedom. Additionally, the duration of business operations played a significant role, with small and medium enterprises benefiting more from their business-generated income. They expanded their businesses by investing in equipment and machinery, while micro-enterprises mostly reinvested income in operational costs. Small and medium enterprises also allocated income to travel and community engagement, enhancing their economic empowerment.

6.4. Practical Implications of the Study

Entrepreneurship enables women to gain control over various facets of empowerment, including decision-making and financial management. Strategies such as separating personal and business finances, managing savings and investments, and directing business income allocation underscore the importance of financial literacy and guidance for women to enhance their financial independence. This empowerment

extends to decision-making within both households and enterprises. Additionally, the duration of business operations influences income allocation, with a focus on business expansion and community engagement.

These women entrepreneurs serve as inspiring role models for their communities, promoting entrepreneurship and striking a better work-life balance. Supporting the growth and sustainability of women-owned businesses not only fosters economic empowerment but also contributes to overall economic growth.

6.5. Recommendations

1. The researchers recommend conducting a comparative study between different regions and different industries to identify commonalities and variations in the factors influencing the economic empowerment of women. This can also be done by adding more industries and respondents and compare the findings per industry for a greater understanding of economic empowerment of women.

2. The inclusion of BIR registration and business permits aside from only DTI registration, and socioeconomic backgrounds should be considered along with the criteria proposed in this study. The researchers recommend that future researchers focus on other measures of economic empowerment aside from the ones used in the study.

3. Conducting a longitudinal study for a more in-depth examination of the long-term effects of entrepreneurship on the economic empowerment of women, particularly for micro-entrepreneurs. This will provide valuable insights into the sustainability and growth of women-owned businesses, track the progress and changes, and identify the challenges faced by women entrepreneurs over time.

4. Due to the difficulty in gathering potential respondents, we recommend future researchers to try other forms of data gathering collection to ensure triangulation of findings.

5. For Filipina entrepreneurs to seek out information and support on accessing finance and resources specific to women entrepreneurs and collaborating with organizatons and to enhance their financial literacy and business skills through workshops, training programs, and online resource with the help of government agencies.

6. For government offices to help in establishing and promoting accessible and tailored business support services for women entrepreneurs such as mentorship programs, training initiatives, and incubation centers. Also, the researchers call for review and revision of existing policies and regulations to ensure gender-responsiveness including promoting gender equality in access to credit, procurement opportunities, government contracts, and public funding.

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Table B1

Interviewee Insights on their Accumulation of Power Before their Venture into Entrepreneurship

Power depends on civil status		
Respondents	**Micro**	"I recently became a widow kasi so kwan talaga decision making is now on me. Everything is on me now, not because I'm a woman but I'm a widow na."
		"Yung sa power, go with the flow pa ako."
	Small	"[…] hindi kasi ako kagaya ng mga women na nakakafeel ng discrimination sa mga husband nila. Yung parang merong tingin sa kanila ay mababa porket sila ay women. Sakin kasi yung husband ko, he is very supportive of what I am doing."
		"[…] siyempre yung sa mga bahay may anak naman ako kaya sinasabi ko na tumulong sila sakin."
	Medium	"I was blessed with a husband who loves and treats me as his equal […] We listen to each other, we weigh which is the most rational decision or the risk we are more willing to take. At times we butt heads but in the end, we tell each other that we have the same goal: to choose what's best for our family and/or our business."
		"My decision is powerful. But I can consider others opinion, too."
Degree of unpaid work depends on civil status and family dynamics		
Respondents	**Micro**	"[…] before that, we used to have a boy […] I don't do household chores kasi hindi ako marunong not even in our business."
		"Pagdating naman sa time, medyo mas iba kasi before. Parang yung work para sakin noon mas madali mag schedule noon. Outside those hours yun lang ang free time pero ngayon 24/7 na ang demand ng time."

	Small	"[…] I make sure na nababalance ko yung work and yung husband ko naman, tumutulong to take care of the kids. Parang yung mga household chores naman, ginagawa rin niya."
		"[…] kapag maraming orders, siyempre yung sa mga bahay may anak naman ako kaya sinasabi ko na tumulong sila sakin."
	Medium	"My husband does the cooking, I do the cleaning. He also helps in the cleaning aspect especially when I tell him to do it or if he sees I do not have time or I am not able to clean. Also, he does most household chores like groceries, garbage, cooking."

Table B2

Interviewee Insights on their Financial Independence Before their venture into Entrepreneurship

Budget allocation primarily focused on household expenses		
Respondents	**Micro**	"Dati kasi di ko iniisip kasi alam ko na marereplenish. Mas nagiging aware ka sa gastusin at kelangan na ibudget."
		"What's mine is mine noon when nung nagtuturo ako. […] So my husband would even give me a separate account for my charitable work. So you don't have to dip into our budget. "
	Small	"[…] tulungan kami ni husband sa mga expenses, meron din siyang work."
		"[..]nadidivide yun naka-allot sa food, education and everything else."
	Medium	"I was in control of my income and expenses. I opted to give most of my income to my mother, to pay our family's debts."
Assets from Inheritance		
Respondents	**Micro**	"Yes, hindi kasi yung husband ko, marami silang lupa na legal payment and may mga properties and extra judicial settlement."
		"May mga pinamana […]"
Joint or no personal bank account		
Respondents	**Micro**	"Yes, pero savings lang siya as in bangko lang."
	Small	"[…] meron po akong personal account and nung nag business kami nag open din kami ng account for our business."
		"Wala akong savings dati kasi napupunta lahat sa family ko for their education

		and everything else.”
	Medium	“Both of us have access to all our accounts, we can check the transactions at any time. We have a transparent system for our finances both in our household and in our business.”
		“Hard to control. Getting better now, I have my business.”

Table B3

Thematic Analysis of the Change of Power of Filipina Entrepreneurs in Baguio City.

Increased responsibility and power over people		
Respondents	**Micro**	“When you run a business, it’s a commitment not just for the business but for your staff too.”
		“kelangan mo nandun to show up everytime kahit tapos mo na yung task. “
	Small	“Meron po kaming part timers na mga senior citizen, mothers, and other parts of the community na tinutulungan.”
	Medium	“But now as the employer, my employees treat my voice as directives.”
Increased control over time		
Respondents	**Micro**	“ It’s really different than when you’re working since nung I was an employee, since when do your tasks, you have a fixed time. When you’re an entrepreneur, there’s no fixed time. Running a business is a 24 hour thing.”
		“Yun naman nagkaroon talaga ako ng time kasi pag nagwowork ka kelangan mo nandun to show up everytime kahit tapos mo na yung task. At least ngayon pag tapos ko na yung gagawin ko for the day, may time na ako mag linis.”
	Small	“Before we started the business, I used to have limited income because I can only work at night and have limited students. Ayoko po kasi na mag full load kasi mapapabayaan ko yung mga anak ko.”
		“Kasi noon halimbawa triny ko rin na magtrabaho, 7am dapat andun ka na, ngayon at least naghuhugas ka muna ng mga plato, tapos pwede ka mag stop saglit para sa mga bagay na kailangan at hindi nakatutok lamang sa kung ano kung may boss ka.”

	Medium	"They rely on my voice, it is not just an opinion or suggestion now, they treat it as an official authoritative instruction."
Better decision making		
Respondents	**Micro**	"Pero yun dahil sa business, nagkaron na ako ng experiences kaya nagkakaroon ako ng challenges na hindi ko naman ma eencounter kung employee lang ako. Mas nagkakaroon ka ng insight pagdating sa decision making and mas naking firm na ako sa mga decisions ko."
	Medium	"the boss will have the final say/decision."
		"I'm better and wiser in decision-making."

Table B4

Thematic analysis of the decision-making participation of Filipina entrepreneurs in Baguio City.

Increased confidence in decision making		
Respondents	**Micro**	"Ayun nag increase since may say na ako at may experience na rin. Parang mas may pinaghuhugutan na ako when it comes to decision making."
	Small	"It increased pero sabi ko nga po sa decision making"
		"Increase. Ano kung at least nadagdagan kasi kontrol mo yun eh. Kasi nung una, kasi kulang ang pag kontrol mo sa bahay kasi nasa isang work ka lang at hindi naman sayo, sahod mo lang hinihintay mo. at least ngayon medyo komonti."
	Medium	"Increased. I can say I'm a hands-on owner."
Remained the same or compromise with partner		
Respondents	**Small**	"[…] kung tama naman yung side ni husband, makikinig din po ako sa kanya para pag nag decide kami, agree din po kami pag nag decide ulit."
	Medium	"Between me and my husband, I am free to express myself before and after our business. The "volume of my voice" did not change - its effect and scope was the same. We treat each other as equal, we gauge which is the better idea or the risk more worth taking, we lay out each other's ideas and fears before we take on a decision. We treat each other's voices with importance. It doesn't matter who the

		idea (voice) came from because in the end, it becomes OUR idea (voice). In totality, my voice is my husband's voice, and his voice is my voice.”

Table B5

Thematic analysis of change of unpaid work of Filipina entrepreneurs in Baguio City.

Lessened unpaid work		
Respondents	**Micro**	“It really decreased kasi nga it took up a lot of my time.”
		“At least this time naka depend na sakin sa efforts ko and everyday I do my schedule ko so nag decrease talaga big time.”
	Small	“hindi na po ako masyadong nagwowork sa household kasi lagi po ako nasa labas so na decrease na po yung work ko like sa paglalaba, sa paglilinis ng bahay, kasi lagi po akong naka field.”
		“Sa gawaing bahay, nabawasan kasi kung gusto mo, pwede mo i allot muna bago ka mag umpisa mag process”
	Medium	“Decreased. Staff’s participate well and helping us, too.”
Remained the same or shared with partner		
Respondents	**Small**	“Pero kung may time naman din po na nasa bahay lang ako, tumutulong pa rin ako sa paglilinis kasi ayoko lang naman na wala akong ginagawa kaya tinutulungan ko pa rin yung worker namin sa mga trabaho sa bahay. At kahit po si husband, tumutulong din po siya sa paghugas ng pinggan, sa paglalaba.”
	Medium	“Household chores were still the same - both my and my husband do it whenever we can.”

Table B6

Thematic analysis of control over savings and investment as an indicator of financial independence of Filipina entrepreneurs in Baguio City

More control over savings from business income		
Respondents	**Micro**	“More control sa savings.”
		“Unlike before nasa bangko lang at alam ko lang na swesweldo ako. Matuto ka talaga na imaximize lahat.” “Ngayon, oo kasi talagang kelangan i keep track talaga lahat. Kasi talagang

		everyday ko na siyang tinitignan.”
	Small	“Ako po ang may control sa personal account at business account namin. Yung mga gustong bilhin for kids, nabibili na rin namin and to eat outside together with the family. Hindi na rin po masyadong tight yung budget. Pinaka important po akin, everytime na may nabibili kaming equipments, it’s an additional investments as well as we bought a car because of our business.”
		“Ako yung may kontrol at least yung ibang anak ko tumutulong naman.”
	Medium	“[…] we have more freedom and ease when it comes to deciding things in our household, such as recreational like travels, visiting relatives whenever, basic needs like we can buy good stuff for our family.”
		“[…] better because the business is already self sustaining.” “We decide and invest it wisely.”
Opening and/or separation of personal bank account		
Respondents	**Micro**	“[…] hiwalay yan, dear. So this business, nagbigay ako ng limit sa negosyo. And the rest, kelangan naka budget sa lahat.”
		“[…] savings lang siya as in bangko lang.”
	Small	“[…] meron po akong personal account and nung nag business kami nag open din kami ng account for our business, para ma separate yung nalalagay sa personal account at business.”
		“[…] may konti naman na savings ngayon pero, ‘di na tulad ng dati.”
	Medium	“[…] we do not have separate finances for business income and savings, nor other investment. My husband and I decided to just let all our finances stay as one, for now.”
		“I share with my husband.”
Able to have personal investments		
Respondents	**Micro**	“Ngayon natuto na ako mag invest sa mga simple lang naman na mga UTF ganon mga insurance.”
	Small	“Pinaka important po akin, everytime na may nabibili kaming equipments, it’s an additional investments as well as we bought a car because of our business.”

		"[…] yung machine at lahat ng gamit ko sa peanut butter ay sa akin na."
	Medium	"I'm considering always investments instead of other unnecessary things."

Table B7

Thematic analysis of control over asset ownership as an indicator of financial independence of Filipina entrepreneurs in Baguio City

Able to own asset and have full control over its use		
Respondents	Micro	"[…] sa core ng family, ako pa rin ang may control ng lahat since my husband passed."
		"Meron na akong nabiling ibang investments like the car. […] more of para sa business ang mga binibili ko. So more of assets talaga siya sa business. Galing rin sa business lahat ng investments as in reinvestments lahat."
	Small	"[…] nadagdagan kung noon po yung tv namin maliit, ngayon malaki na po." "[…] ako po talaga ang may control dun sa assets namin."
		"[…] hindi lahat kumpleto since mag cocomplete pa rin pero kahit papano meron naman."
	Medium	"I was able to buy cheap laboratory equipment from my previous employer and previous connections. I convinced my husband to use semi-automated machines at first because we are just starting, we do not need high end lab machines which cost 850,000 and above. The semi-automated machines can provide high quality results provided that the end user knows how to perform quality assurance steps which I learned from my previous employment. We also purchased microscopes and other supplementary lab equipment in the U.S."
		"Our assets remained the same."

Table B8

Thematic analysis of control over income and expenditures as an indicator of financial independence of Filipina entrepreneurs in Baguio City

Increased amount of and more control over income allocation		
Respondents	**Micro**	"Same pa rin siya ever since."
		"[…] mas naging strict na ako sa pera ko unlike before so mas may kontol na ako ngayon."
	Small	"I considered myself as employed in my own business kaya meron din akong salary sa work ko." "I have more control po, pagka nagpupurchase kami ng raw materials, ako ang nagwiwithdraw ng pera. Kahit na corporation siya, nakapangalan pa rin naman sakin kaya I can withdraw anytime."
		"[…] na divide divide ko na at nalalan sa ibat-ibang bagay na." "[…] lalo kung sayo yung business, may pandagdag at di ka lang umaasa sa iisa."
	Medium	"When our business needs something, we are able to use its income to acquire it. In this sense, we have a better control now on using our income to improve our business. Compared to when we started, we were hesitant and very cautious on using our finances for the business, we now have more confidence in using our finances for our business' advancement." "[…] if our business needs something like an additional manpower, additional equipment, we have more control now since we have a safe amount of money now to use our finances to address these needs."
		"[…] getting better now. I have my business."
Allocation of income includes other expenses		
Respondent	**Micro**	"[…] kelangan naka budget sa lahat. I have maintenance and all that so I have to take care of myself too."
		"[…] nakihati din naman ako at may nabili kaming property pero at least may ambag ako."
	Small	"We were also able to maintain yung pagbabayad sa tuition ng scholar namin. And nakapagdagdag na rin kami ng employment which is a big factor din po na parang yun din kasi yung goal namin na sana maka create kami ng employment para makatulong po kami sa community. Nagkaroon po kami ng mga workers

		na pinapasahuran po namin which is masaya rin kasi sila rin as a worker, nakakatulong din sila sa families nila sa mga expenses sa bahay nila.”
		“[…] nadidivide yun naka allot sa food, education and everything else.”
	Medium	“[…] we have more freedom and ease when it comes to deciding things in our household, such as recreational like travels, visiting relatives whenever, and basic needs. We can buy good stuff for our family.”

Empowering Women Entrepreneurship Through Tailored-Fit Technology Incubation Program

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ABSTRACT
This paper looked at how an incubation curriculum could be used in the classroom to facilitate technology transfer and help the community commercialize technologies. This method aimed to make a positive difference by encouraging innovation and entrepreneurship and making it easier to turn ideas into products that can be sold. The ADDIE Model guided the development of the curriculum and interviews were used to look at how well this technique worked by collecting data from teachers, students, and people in the community. The results showed that putting an incubation program into the curriculum not only helps students learn how to be entrepreneurs, but also encourages technology transfer, which can lead to economic growth, women empowerment, and development in the community.

Keywords: Curriculum, Entrepreneurship, Technology Transfer, Community, Women Empowerment

1. INTRODUCTION

In recent years, the gap between what you learn in the classroom and what you can do in the real world has received more and more attention. Traditional classroom teaching is not always useful in the real world, so the skills students learn do not always match what employers want (Boss & Krauss, 2022). At the same time, local towns face problems with economic growth and are finding ways to make a living. This has been identified to be a focus of research in the skills gap, pointing out mismatches between educational outcomes and workforce requirements. The dynamics of the industries, arising from new technological advancements and globalization, have yet further accentuated this call for more seamless transition from academia to the professional realm (Ochieng et al., 2023).

To encourage creativity and entrepreneurship among students, the incorporation of incubation programs in educational settings has gained popularity. Students could be allowed to design, experiment with, and perfect their inventions in incubators' encouraging environments. The work of Sokhanvar et al. (2021) suggests this practical learning experience is linked to improved student collaboration, improved problem-solving skills, and increased engagement. Moreover, Finch et al. (2016) state that preparing students for the competitive labor market establishes practical skills other than theoretical knowledge such as real-life problems.

Technology transfer from educational institutions to local communities can also have the potential to boost the local economy in addition to empowering the community, particularly women. These

communities can thus have new options in terms of employment and self-sufficiency by supporting the commercialization of student-led ideas. Apart from addressing acute local needs, the student-community collaboration helps foster responsibility and social consciousness among the student body (Millican & Bourner, 2011; Ratten & Jones, 2018)

To deal with these problems, there has been a growing interest in putting incubation programs into educational institutions. The goal is to give students hands-on experience making products that can be sold, while also helping the community especially the youth and women. This study looks at the benefits of this kind of integration and how it affects student learning and community transformation.

1.1. Research Problem and Objectives

The study was undertaken to develop an incubation curriculum to advance technology transfer and community development. Specifically, the research aimed to: (a) identify key themes that need to be considered in developing an incubation curriculum and (b) determine the benefits from adopting an incubation curriculum.

2. REVIEW OF RELATED LITERATURE

Related literature reviewed includes technology business incubator, technology business incubation curriculum, and technology transfer and community development.

2.2. Technology Business Incubator

Policymakers increasingly recognize the pronounced regional dimensions of both entrepreneurship and innovation (Phan et al., 2016). Technology business incubation (TBI) has emerged as a new way to foster local and regional environments for new ventures over the last five decades.

Many incubation mechanisms, such as technology incubators, accelerators, and science parks, have successfully led to the development of sustainable regional ecosystems with the concentration of innovative entrepreneurial activities, developing intense interest in policy circles (Mian et al., 2016).

Technology incubators represent a link between science, technology, education, knowledge, entrepreneurial talent, and capital. They help connect science, technology, education, knowledge, entrepreneurial talent, and capital (Mian et al., 2016). They are embedded in a regional ecosystem composed of key stakeholders such as industrial clusters, academic institutions, research labs, banks, and investors. As such, they are mechanisms that are uniquely considered to provide important links in the entrepreneurial value chain at the national and/or regional level (Lamine et al., 2018).

With the increasing perception of entrepreneurial universities as engines of knowledge-oriented regional economic growth through technology transfer and commercialization of research results, a regionally integrated technology incubation mechanism has the potential to be the principal vehicle for nurturing and growing such enterprises (Smith & Zhang, 2022). Also, it is now widely believed that incubation

platforms are the key means to stimulate the development of an innovative business climate at the regional level. In a bid to cope with the challenges of the prevalent global economy, incubation platforms are seen as effective vehicles for job creation and tools to initiate and revitalize industries and regions (Lamine et., al., 2018).

2.2. TBI Curriculum

TBI plays a significant role in nurturing and supporting entrepreneurship, especially in this regard, in consideration of the student-driven pursuit of business ideas. It involves providing an environment that is favorable to such startups flourishing and developing innovative ideas into workable business ventures. It plays the role of providing through mentorship, financing, and networking, the acceleration of such ventures (Hasche & Linton, 2021).

Research has shown that Technology Business Incubation programs can provide tailor-made support and resources that enable the female gender to overcome the challenges associated with entrepreneurship (Li et al., 2020). The mainstream programs offer mentorship, networking, access to capital, and training in technologies, business development, and marketing (Vaz et al., 2023). Ensuring an innovative and collaborative environment, Technology Business Incubation ensures that women entrepreneurs thrive under a competitive business environment.

Development of an incubation curriculum creates ideas among the students about TBI, which can be shared among the women within the community. It is already proven that tailor-made courses of study positively affect the success rate among women entrepreneurs in technology entrepreneurship (Mamabolo & Lekoko, 2021). Modules in institutions need to tap the potential of budding female innovators by addressing gender-specific problems in access to funding and networks. Hence, if students are going to start and expand their businesses in the technology sector, mentorship programs along with an approach of practical skill development in the curriculum can largely help them (Bodolica & Spraggon, 2021).

2.3. Technology Transfer and Community Development

The intersection of technology transfer with community development has developed as an essential way of fostering socio-economic growth, especially in settings where access to resources and opportunities is limited. From this perspective, universities are critically important actors as a source of innovation, producing knowledge and technology to create positive change in local communities (Arocena & Sutz, 2021). It is considered the main area of transfer of university-generated products to women, intending to empower the tools and resources that can help them get hold of improved livelihood.

Increasing empirical evidence gives room for technology transfer interventions, which show potential for community development and emancipation of women. For example, Gyawali et al. (2020) and Tabares et al. (2022) have published successful cases of technology transfer projects contributing to sustainable livelihood opportunities for women in underprivileged communities. Normally, these projects involve the adaptation and diffusion of university products, such as agricultural technologies or handicrafts, to women's groups in the rural context. Normally, this is achieved through training programs and capacity-

building initiatives that give women knowledge and skills necessary for productive use of these technologies. Furthermore, according to De Rosa et al. (2020), technology transfer interventions have been found to carry broader socio-cultural effects, through which women are empowered to assert agency, challenge traditional gender roles, and take up more active roles in decision-making within their communities.

Other strategies may include transfer of universities' knowledge and resources to women in the less-privileged communities to create sustainable livelihoods that help reduce poverty and empower the women toward gender equality (Modic et al., 2022). However, while such potential exists, access, adoption, and sustainability challenges represent significant hurdles that must be addressed through proper policies and partnerships.

Moving forward, more research is needed for better comprehension and understanding of the mechanisms through which the transfer of technology can create inclusive development outcomes in a better way and empower women as agents for change within the communities they live in.

3. THEORETICAL LENS

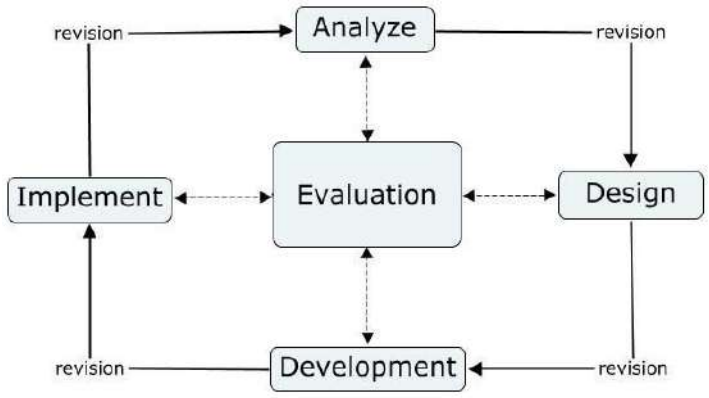


Fig. 1. ADDIE Model

The ADDIE model presented in Figure 1 is a foundation stone for instructional design and curriculum development. "ADDIE" stands for Analyze, Design, Develop, Implement, and Evaluate. This process does not mean that one strictly follows the steps in a linear manner. Teachers, instructional designers, and trainers find this process very helpful because the well-defined stages facilitate the implementation of effective training tools (Larson & Lockee, 2019). When applied to creating a curriculum for a TBI program, each phase plays a crucial role. In the Analysis phase, certain needs and objectives like innovation, entrepreneurial skills, and technological proficiency among participants are identified. It will be a key initial step toward understanding the target audience and tailoring the curriculum to meet their requirements effectively. As a technology-focused incubation program, this will involve assessing the latest trends in the industry, identifying key skills gaps, and determining resources available to implement it.

The Design phase concentrates on the description of the structure and content of the curriculum, ideation, product development, market analysis, and funding strategies among other things for a technology business incubation program. The inclusion of design thinking and agile methodologies makes the curriculum flexible and adaptive, considering the changing atmosphere of the technology industry. The Development phase takes the form of instructional materials, activities, and resources that can engage participants and assist in learning. In terms of the process, this would take the form of interactive workshops, case studies of real-world tech startups, access to mentors from the industry, and experts. In a nutshell, this process will empower the participants with knowledge, skills, and resources to confront the competitive environment of technology entrepreneurship. Once the curriculum is developed, the Implementation phase follows; then comes the Evaluation phase where an initial evaluation is conducted to determine areas for improvement.

4. METHODOLOGY

Research in the form of curriculum development applies a query-based approach toward the production, revision, and modification of educational programs and materials oriented toward improving learning outcomes and educational experiences. In this way, it synthesizes evidence-based practice, pedagogical theories, and feedback from stakeholders to design effective curricula for learners with different needs and living in various contexts.

To develop the curriculum, the ADDIE model was instrumental in crafting an effective entrepreneurial curriculum by allowing for systematic analysis of learner needs, design of tailored content, and iterative development and evaluation, ensuring that aspiring entrepreneurs receive a comprehensive and adaptive educational experience. Its structured approach ensures that each phase, from initial assessment to final implementation, is meticulously planned and refined to nurture entrepreneurial skills and knowledge effectively. According to Shahat et al., (2023), through rigorous analysis, identifying the needs and objectives of the program; developing a tailor-made curriculum that would satisfy the requirements; and developing the curriculum based on engaging content and inclusive learning methods, implementation will involve the actual delivery of the curriculum, while evaluation through a process of recurrent feedback and assessment is supposed to provide the means for refinement and improvement to optimize the outcomes.

This study adopted a systematic methodology that captured a set of narratives and experiences from different stakeholders. In that sense, this study involved systematic approaches in terms of employing semi-structured interviews with the educators, students, and community members to deepen the multidimensional aspects surrounding curriculum integration. This was the chosen methodological framework because this study would enable an in-depth exploration of perceptions, experiences, and outcomes concerning curriculum integration. This approach provides room for participants to voice their opinions, hence generating a rich and nuanced understanding of the complexities associated with curriculum integration and its results on various stakeholder groups. This approach enabled the collection of qualitative data and fostered a collaborative environment that could generate meaningful insights that are associated with the integration of the curriculum.

4.1. Conceptual Framework of the Study

Collection of qualitative data through key informant interviews yielded themes that were considered in the development of an incubation curriculum. The adoption of the curriculum benefited learners and the community, as documented through interviews with key stakeholders. This schematic diagram of the study is depicted in Figure 2.



Fig. 2. Conceptual Framework of the Study

5. RESULTS AND DISCUSSION

Presented in this section are the results of the study.

5.1. Key Themes Considered in Developing an Incubation Curriculum

The analysis of the gathered data shows that there are several key themes that should be part of the main topic when designing and developing the curriculum, as illustrated in Figure 3. These themes are ideation, protection, incubation, and commercialization. Ideation includes design thinking, customer discovery, and business model. Protection covers intellectual property. Incubation comprises benchmarking, prototyping, and packaging. Commercialization incorporates IEC development and pitching.

For Ideation, learners are required to come up with a product idea, prepare a customer journey map, and make a business model canvas. In terms of Protection, learners work on utility model and/or trademark application depending on their output. As to Incubation, learners package a minimum viable product. Relative to Commercialization, learners produce a poster, pitch deck, or video ad.

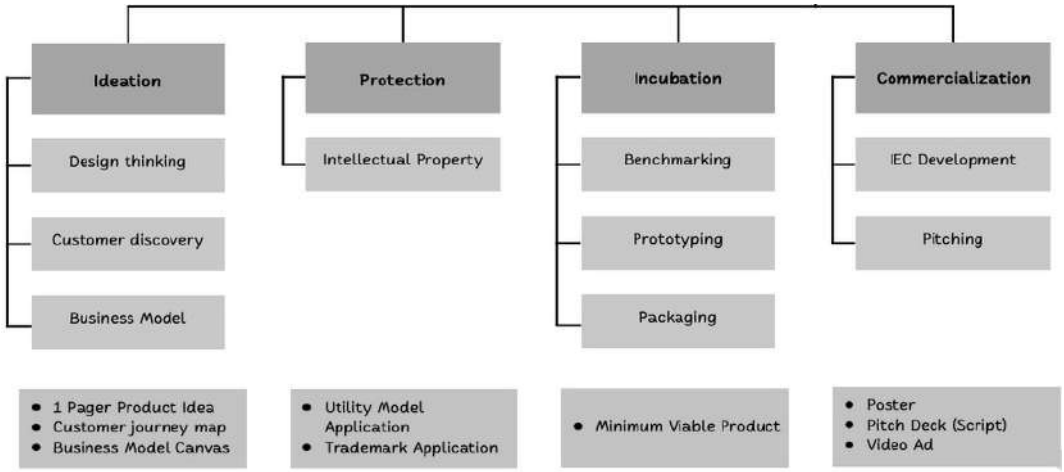


Fig. 3. Developed Incubation Curriculum

5.2. Benefits from Adopting an Incubation Curriculum

The study generated significant results concerning the adoption of incubation programs in the educational context. A convergence of the respondents' stakeholders' perspectives informed about the actual fact of the potential of such programs regarding the realization of the gap between the classroom and its eventual application in the real world. In this respect, teachers reported increased student engagement and the development of entrepreneurial mindsets, while students identified enhanced skills of discovering market opportunity and developing viable solutions.

Educators say that the incubation curriculum helps students learn how to solve problems and pushes them to think of new ways of doing things. Students said they felt more confident in their business skills and were excited to use what they had learned in the classroom in real-world situations.

Community members acknowledged the positive impact of facilitated technology transfer which contributed to a more extensive societal innovation. Members of the community talked about how technology transfer helps local companies and the economy grow. These results show how adding an incubation curriculum to a school's academic program could stimulate creativity and economic growth in the community, particularly among the youth women.

On this basis, incubation programs, through education, are inseparable components for the process of inculcating innovation, entrepreneurship, and socio-economic growth.

This idea was much appreciated as it helped address the gap between what students learn in class and what they can do in the outside world. Incubation programs integrated into educational settings is one of the ways to help students develop an entrepreneurial mindset (Almansour, 2022). This facilitates finding market opportunities and coming up with workable answers, hence facilitating the transfer of technology for workable solutions towards the common good (Burnette et al., 2020). The transfer of technology is also simplified as it is much easier to find a way to pass over new ideas and solutions to the general community. Research results have shown that such integration could be very effective when it comes to marketing and taking the economy forward.

The integration of entrepreneurship and transfer of technology into educational institutions attracted much attention because it has the capability to encourage innovation, economic growth, and hands-on learning. This looked at how the incubation curriculum can be used in classrooms and how the technologies emerging from this attempt can be sold in the community. Cooperation among universities, students, and local businesses can create a culture of creativity, create jobs, and help society progress.

6. CONCLUSIONS

One viable strategy to bridge the gap between academic study and the real-world application is the use of an incubation curriculum integrated into the educational institution's academic programs and the transfer of technology to the local communities. This study's findings highlight the importance of collaborative learning and experiential learning to foster student innovation and community development. With the great hope of uplifting socio-economic conditions, educational institutions find ways to equip students with skills that go beyond what is practiced in class, thus making an impact felt in the local community through livelihood for the youth and women.

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About the Institute

University of the Philippines Institute for Small-Scale Industries

The University of the Philippines Institute for Small-Scale Industries (UP ISSI) began on 2 March 1966 as a training institute for small industries, established under a bilateral agreement between the governments of the Philippines and the Netherlands. On 4 August 1969, Republic Act No. 6041 constituted it as a research and extension unit of the University of the Philippines.

The law charged the Institute with training competent people to a level at which they can assist existing small-scale industries; providing consultancy and extension services to small and medium-sized industries; conducting research into plant operations and disseminating the results; and leading efforts to solve the problems of small and medium-sized industries that require expert advice and assistance.

From that founding mandate the Institute has grown into a center for training, research, extension, and information work on micro, small, and medium enterprises. Its Research Division conducts applied and policy-oriented studies on the MSME sector, publishes the results, and organizes the scholarly exchange of which this conference and these proceedings form a part.

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The International Conference on Entrepreneurship and Small and Medium Enterprise Development (ICESMED) is a biennial research conference organized by the University of the Philippines Institute for Small-Scale Industries. It brings together academics, researchers, extension officers, practitioners, and postgraduate students from the Philippines and abroad to present and discuss new knowledge in entrepreneurship and SME development.

The conference exists to give researchers a venue in which to advance new knowledge in these fields; to let expert and peer commentary sharpen that work; to publish the papers presented so that the knowledge reaches as wide a community as possible; and to move that knowledge into the policy domain, where it can serve the enterprises it studies.

This Volume

This is Volume 1 of the proceedings, covering the 1st ICESMED, held on 28 and 29 November 2023 at Malcolm Hall of the UP College of Law and at the Institute for Small-Scale Industries, UP Diliman, Quezon City, under the theme "Resilience and Relentlessness: Bouncing Back and Leaping Forward." Of 101 abstracts submitted, 54 papers were presented at the conference and 40 full papers underwent double-blind peer review; the 31 papers revised and returned by their authors are published here.

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Researchers interested in presenting at a future ICESMED, or in the Institute's other research and extension programs, may write to the UP ISSI Research Division at issi.research@up.edu.ph. Announcements, templates, submission guidelines, and the proceedings of past conferences are posted at entrepreneurship.org.ph.

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