

Drawing Insights from Adversity: Business Resilience Strategies of Agribusiness Micro and Small Enterprises (MSEs) from Covid-19 Pandemic and Natural Disasters

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Abstract

Micro and Small Enterprises (MSEs) serve as the backbone of any economy, making significant contributions to employment and economic growth. However, the Covid-19 pandemic along with natural disasters had detrimental impacts on these enterprises. The study determined the strategies employed by agri-business MSEs to enhance their resiliency stemming from the challenges and struggles they have experienced as a result of these calamities. It made use of the qualitative research design specifically the Descriptive Case Study approach. 15 agribusiness MSEs within La Trinidad, Benguet were interviewed selected through purposive sampling. The narratives were analyzed using Yin's Model.

The study found that the enterprises were severely impacted by the pandemic and natural disasters. They lost money, properties, and resources, and their commercial activities were affected. In response, the management of these companies have implemented five strategies to bolster their resilience. Firstly, they improved their online visibility by creating or updating their websites and maximizing the use of social media channels. Secondly, they promoted increased partnership and cooperative efforts with other businesses. Thirdly, they innovated their processes and services. Fourth, they introduced new products. Lastly, they optimized their resources. They also mentioned other actions that can increase resilience even further, such as obtaining insurance, setting aside for contingency funds, enhancing financial monitoring, and creating a plan to manage risks and outline a suitable course of action in the event of calamities.

The study concludes that most of the enterprises use reactive techniques rather than adaptive ones. They strive to achieve resilience by adjusting to circumstances, demonstrating resourcefulness, and maximizing available resources. The researcher recommends that other MSEs benchmark on the findings and giving more emphasis to preparation through contingency planning and crisis management strategies. Furthermore, it is also recommended to concerned government agencies and non-government organizations support these measures through relevant policies and programs.

Keywords: Resilience, Agribusiness, Micro and Small Enterprises (MSEs), Covid-19 Pandemic, Natural Disasters

Introduction

Small and medium enterprises (SMEs), including micro SMEs, are the bedrock of global, national, and

local markets (OECD 2019). They remain as the backbone of any economy and significantly contribute to employment and economic growth (Erdiaw-Kwasie et al., 2023). They make up over 90% of all firms and account, on average, for 70% of total employment and 50% of gross domestic product (GDP) (UNCTAD, 2022). In the Philippines, Micro, small and medium enterprises (MSMEs) drive the national economy. They accounted for 99.50% of all enterprises and employed 63.20% of the labor force as of the end of 2018 (ADB 2020). However, they remain highly vulnerable among the different enterprise-size classes as proven during the COVID-19 pandemic. Lobaton (2023) added that these types of enterprises and their employees have been particularly hard hit by the recession because of the COVID-19 pandemic. Similar to other organizations, they found themselves unprepared, revealing their vulnerability (Erdiaw-Kwasie et al., 2023). The study is aligned with Sustainable Development Goal (SDG) 9: Industry, Innovation, and Infrastructure. While this goal primarily focuses on promoting inclusive and sustainable industrialization, fostering innovation, and building resilient infrastructure, it indirectly addresses the resilience of business organizations by emphasizing the importance of creating robust, adaptable, and sustainable economic systems and infrastructure that can withstand shocks and challenges.

When Covid-19 entered the world stage in early 2020, It caused widespread disruption to the global economy, with small and medium-sized enterprises (SMEs) bearing the full force of the crisis. The cascading impacts of lockdown measures, social distancing requirements, abrupt shifts in regulations, and prolonged travel restrictions plunged numerous SMEs into hardship (Schweitzer, 2023). This caused insufficiency of cash flows to maintain operations (Lobaton 2023) thereby leading to the closure of some businesses permanently. Santos et al. (2022) found that sectors depending heavily on the physical presence of their workforce (e.g., construction, agriculture, manufacturing) incur more opportunity losses compared to sectors where workforce can telework (e.g., online retail, education, business process outsourcing) incurring losses in the range of PhP 3.3 trillion (with telework) to PhP 4.8 trillion (without telework) due to the Covid-19 pandemic.

Shinozaki and Rao (2021) found that MSMEs often experience more severe impacts, endure extended periods of struggle, and encounter a more challenging path to recovery compared to larger their larger counterparts. UNDRR (2020) explained that this is because small enterprises have limited access to finance, limited access to market information, low investment in research and development, underdeveloped sales and distribution channels, and relative shortcomings in technological, managerial, and human capabilities. This was confirmed by Suciati (2022) stating that the pandemic's repercussions could disproportionately harm MSMEs due to their typically limited financial and personnel resources, which may not be adequate to address the challenges posed by COVID-19. Baghel (2023) added that these enterprises faced myriad issues following COVID-19 due to their inherent characteristics of small-scale operations, a limited monetary base, and a confined area of operation. Microbusinesses with less than 10 employees are also estimated to be more likely to go bankrupt compared to medium businesses with more than 51 employees (ILO, 2020). MSMEs are also susceptible to another form of risk: natural disasters. These events can inflict damage upon a business's assets and infrastructure and have both physical and psychological repercussions on the business owners and employees (Wouter Botzen et al., 2019). Similar to other nations in developing Asia, the Philippines is located in an area prone to disasters.

When disaster strikes, MSMEs are hit harder, suffer longer and are slower to recover than larger businesses. If the global community is to improve the lives and livelihoods of people in emerging and growing economies, it is recommended that risk be tackled in SMEs (UNDRR, 2021). Therefore, resilience and adaptation to shocks from pandemics such as COVID-19 are urgently needed (Erdiaw-

Kwasie et al., 2023). Relatively little resilience research has focused upon the specific context of small and medium sized enterprises, organizations with fewer than 250 employees as defined by the European Union, which is perhaps surprising given the extent of the contribution made by these business organizations (Wishart, 2018). Erdiaw-Kwasie et al. (2023) concluded that there is limited knowledge of pandemic adaptation among SMEs, existing literature remains inconsistent and fragmented, and that there is limited systematic review on SMEs and pandemic coping strategies.

Conceptual Framework

The study is grounded in two key pillars, specifically the Dynamic Capabilities Theory and Organizational Resilience, providing a foundation for the research.

The Dynamic Capabilities Theory emphasizes a firm's ability to adapt and respond to changing environments. MSMEs with strong dynamic capabilities can sense environmental changes, seize new opportunities, and reconfigure their resources to maintain competitiveness and resilience in the face of challenges. The theory emerged as both an extension to and a reaction against the inability of the resource-based view (RBV) to interpret the development and redevelopment of resources and capabilities to address rapidly changing environments (Bready et al., 2018). The theory expands on the concept of sustainable competitive advantage, which suggests that a firm's success isn't just about having valuable, rare, inimitable, and non-substitutable resources (VRIN). Instead, dynamic capabilities allow organizations to effectively organize and adjust their resources and abilities to cope with fast-paced changes. Therefore, dynamic capabilities are methods that help organizations adjust their strategies and resources to maintain lasting competitive advantages and excel in swiftly evolving environments. The theory holds significant relevance not only in routine operations but also in times of crises and disasters.

Dynamic capabilities refer to a firm's ability to effectively organize its activities and resources within the global system of specialization and cospecialization. They encompass the firm's initiatives to influence the market in a manner that facilitates the creation and capture of value. This often entails adapting, adjusting, or even completely overhauling the firm's strategies and operations to ensure alignment with the ecosystem and markets it operates within, sometimes necessitating transformation (Teece, 2010).

Organizational resilience is defined as “the ability to recover from adverse situation by managing existing company resources and capabilities” (Chowdhury et al., 2018). It is a firm’s ability to effectively absorb, develop situation-specific responses to and ultimately engage in transformative activities to capitalize on disruptive surprises that potentially threaten organization survival (Lengnick-Hall et al., 2011) as well as the ability to survive or to maintain their vitality in a changing world that constantly requires adaptation Tengblad & Oudhuis (2018). Xiao and Cao (2017) added that organizational resilience is a multi-level conception and related to the organizational resources, routines and process. Resilience across levels including individuals, groups and organizations and depends on the interactions among different levels.

According to Prayag et al. (2018), there are two dimensions to observe organizational resilience, namely adaptive resilience and planned resilience. An adaptive resilience is the competence of an organization to overcome threats and challenges within the business environment. Adaptive resilience is determined by the organization's leader, social capital, internal collaboration, organizational experience, and support from their employee. Planned resilience is a planned preparation to overcome predicted threats or challenges from the business environment. Adaptive resilience has a significant influence on business performance (Chowdhury et al., 2018), and has been identified as a strong determinant of a business's performance sustainability when facing a crisis such as natural disasters, calamities, or pandemic

outbreaks (Purwanti & Hapsari, 2022). Furthermore, Prayag et al. (2018) determined that resilience has also a significant impact on financial performance of a business organization.

For MSMEs, profitability hinges on the presence of all resilience attributes. In contrast, larger enterprises can compensate for the absence of certain resilience attributes through factors like minimal sales decline, limited employee reduction, and longer operational history (Romo et al., 2023). A resilient business considers the value of information exchange and dissemination. Thus, a business is said to be sustainable if it maintains a sound and working framework to improve an adaptive capacity for any calamity or disaster (Cutillas et al., 2022). According to Dias et al. (2022), a company's network positively influences its resilience and risk taking influences innovation and resilience of these MSMEs. COVID-19 pandemic resulted in consequences never observed in previous crises. A resilient company or organization is defined as the capacity to use its technical, economic and social resources in order to develop long-term skills and competencies, in an efficient, reliable and flexible manner, and in a way it could manage challenges and exploit opportunities (Tengblad & Oudhuis, 2018).

In the Philippines, the Department of Trade and Industry categorizes MSMEs based on their asset size and number of employees. Enterprises are classified as micro if they have PHP 3,000,000 or less in assets and one to nine employees, small enterprises if they have PHP 3,000,001 to PHP 15,000,000 in assets and 10 to 99 employees, and medium enterprises if they have PHP 15,000,001 to PHP 100,000,000 in assets and 100 to 199 employees. Large enterprises have over PHP 100,000,001 or more in assets and 200 or more employees.

The 2022 list of establishments of the Philippine Statistics Authority (PSA) recorded a total of 1,109,684 business enterprises operating in the country. Of these, 1,105,143 (99.59%) are MSMEs and 4,541 (0.41%) are large enterprises. Micro enterprises constitute 90.49% (1,004,195) of total establishments, followed by small enterprises at 8.69% (96,464) and medium enterprises at 0.40% (4,484). In the distribution per region, Majority of the MSMEs can be found in the National Capital Region (NCR) with 204,844 (18.54%) business establishments while 23,467 or 2.12% can be found in the Cordillera Administrative Region. Collectively, these MSMEs generated a total of 5,607,748 jobs or 65.10% of the country's total employment. The remaining 34.90% comprising of 3,006,821 jobs were contributed by large enterprises (DTI, 2022).

The Barangay Micro-Business Enterprises (BMBEs) Act of 2002 or Republic Act No. 9178 assimilated micro-enterprises into the informal and mainstream economies. Incentives were offered to facilitate their integration, such as exemption on income tax and minimum wage law and a special credit priority window for their financing requirements (Aldaba & Aldaba, 2014; Agoot, 2018).

The Philippine agribusiness sector is roughly composed of five (5) subsectors; these are: crop production, animal production (includes livestock and poultry), Forestry and Logging, Fishery (including aquaculture) and Agri-support services and manufacturing. Agribusiness as an economic sector, has the greatest impact on the national income of the Philippines serving as an economic backbone of the country. Statistics show that agri-production alone contributes to 9 to 11% of the GDP but can contribute as much as 38 to 40% when integrating it with agro-processing and agri-services (Baticados, 2018). This study will be focusing MSMEs under crop production and agri-support services and manufacturing such as farms, food processors, and companies engaged in agri-tourism. Dili (2022) concluded that productivity and security of the food and service industries have been significantly impacted by the Covid-19 pandemic exposing many Filipinos at risk of food insecurity because of unemployment and rising food prices.

The tourism and leisure industry has faced the COVID-19 tourism impacts hardest-hit and lies among the most damaged global industries (Abbas et al., 2021). According to the United Nations World Tourism Organization, 74% of international tourist arrivals and 1.3 trillion US dollars of international tourism receipts were lost due to the Covid-19 pandemic. According to the Philippine Statistics Authority (PSA), the impact of the pandemic on domestic tourism was reflected in the significant contraction in GVATI in 2020 by 72 percent to P919.2 billion, from the P3.3 trillion gross value added of tourism industries (GVATI) recorded in 2019. GVATI is the sum of all gross value added from establishments that are considered tourism industries, regardless of whether they serve tourists or not.

Manurung and Widodo (2022) concluded that improvisation and experimentation are becoming the only plausible alternatives for MSEs to manage uncertainty. Entrepreneurs endeavor to make the most of the resources they currently possess to explore fresh prospects, a concept commonly known as entrepreneurial bricolage. Similarly, Berse et al. (2023) also found that to cope with the disruption, most reported adopting adaptive mechanisms.

There were many strategies employed by MSMEs in coping with the effects of natural disasters and calamities. For instance, Flaminiano, et al. (2021) found the following business strategies employed by MSMEs in coping with the effects of the pandemic: differentiation from competition such as marketing new products, innovative promotional strategies, innovative pricing strategies, ensuring quality of products, and cost reduction and control. Many employed psychological, organizational, and economic strategies to address challenges, prioritizing the enhancement of their human, social, and financial assets, while deeming alternative responses less effective (Gianiodis et al., 2022). Some businesses embraced technology for promotional purposes as a means of adapting to change and capitalizing on opportunities. This was aimed at better preparing to withstand both internal and external shocks (Lobaton 2023). Suciati (2022) added that MSMEs could embrace mass cooperation through social media for knowledge development and innovation to acquire resiliency. Social capital has also been proven to provide non-financial benefits for business actors in times of crisis as it can assist MSEs to efficiently obtain essential resources such as fund and labor (Huang & Farboudi Jahromi, 2021).

The purpose of this study is to determine the strategies employed by agri-business MSEs to enhance their resiliency stemming from the challenges and struggles they have experienced as a result of the Covid-19 pandemic and those they have encountered brought by natural disasters and calamities. The results of the study can generate valuable insights, inform policy decisions, and contribute to academic knowledge, ultimately supporting the resilience and sustainability of businesses in the sector. Medium sized enterprises are not part of the study since there are no registered agribusiness company of such size within the locale of the study.

Methods

Research Design

The qualitative research design, particularly the Case Study approach, was employed for its ability to conduct a thorough and comprehensive examination of the phenomenon. Case studies can be used to explain, describe or explore events or phenomena in the everyday contexts in which they occur (Yin, 2009). This method facilitates capturing the participants' experiences and perspectives within the context of the local setting, ensuring a rich and nuanced understanding of the subject matter.

Sampling and Participants of the Study

The participants for the study involved the owners or managers of Micro and Small and Enterprises (MSEs) in the Agribusiness sector in La Trinidad, Benguet. The companies selected as part of the study were farming establishments, food processors, traders or retailers, and agri-tourism establishments. 15 participants were selected through purposive sampling as presented in table 1.

Table 1: Profile of Participants

Participant number	Category	Line of Business	Number of Employees	Interviewee
Participant 1	Micro	Vegetable farm	5	Owner/Manager
Participant 2	Micro	Poultry farm	8	Manager
Participant 3	Small	Vegetable farm	5	Assistant Manager
Participant 4	Small	Vegetable, Piggery & Poultry Farm	15	Owner
Participant 5	Micro	Cut flower & Agri-tourism	6	Owner/Manager
Participant 6	Small	Farming & Agri-tourism	11	Owner
Participant 7	Micro	Retailer (of vegetables, fruit, and processed food)	2	Owner
Participant 8	Small	Strawberry Farming with food processing	21	Manager
Participant 9	Small	Agent/shipping	7	Owner/Manager
Participant 10	Micro	Strawberry Farming	8	Owner/Manager
Participant 11	Small	Ornamental plants & Agri-tourism	12	Supervisor
Participant 12	Small	Agent/shipping	5	Owner
Participant 13	Micro	Vegetable Farming	5	Owner/Manager
Participant 14	Micro	Food Processing	8	Manager
Participant 15	Micro	Retailer (of vegetables, fruit, and processed food)	3	Owner

Data Collection Techniques and Procedures

Interviews using a semi-structured interview guide was the primary method for gathering data. The research process adhered to ethical principles, commencing with the implementation of informed consent to ensure participants' full awareness of the interview questions posed to them, until the utilization and protection of the data gathered. The data collection instrument has undergone tool validation to ensure that it addressed the research problems. The participants were also informed of the purpose and objectives of the study, their anonymity as participants, the confidential treatment of their responses, and their right to withdraw anytime during the interview.

Additional measures were provided to minimize risks during the conduct of the study. Electronic materials were saved to a password-protected computer and the data gathered were treated with confidentiality and used only for the study.

Analysis of Data

The researcher followed the five phases of analysis proposed by Yin (2011) composed of a nonlinear cycle of compiling a database, disassembling data, reassembling data, interpreting data, and concluding the data. The process provides a systematic approach to analyzing case study data, guiding researchers through the process of familiarization, thematic framework development, indexing, charting, and interpretation.

Ethical Consideration

The study underwent ethics review to ensure that ethical issues are addressed. Anonymity and voluntary participation was respected throughout the study. Participants were informed that the conversation was recorded, that they can withdraw anytime from the interview, and that they can choose not to answer questions they may find sensitive or the answers to which they may find too personal. They were likewise informed that they can use the local dialects during the interview to facilitate the conversation.

Sensitivity to the interviewee's position and their rights was ensured. Probing questions were used to ask for elaboration or steer the conversation back to the main topic in case it veers off a little. During the interview, the participants were identified using codes like P1, P2, and so on to anonymize their identities. These measures were put in place to maintain a relaxed atmosphere and facilitate a smooth flow of conversation although the interview questions are generally non-intrusive as it revolves around coping strategies employed by the organization. This ensured that there was no emotional or psychological harm on the part of the participants.

Results and Discussions

Effect of Calamities

Three themes emerged from the participants' narratives on the effect of calamities like Covid-19 and other natural disasters. These are destruction or loss of properties and resources; disruption of operations; and limited earning capacity.

Destruction or loss of properties and resources

The primary effect of calamities particularly those by natural disasters to Micro and Small Enterprises (MSEs) in the agribusiness industry is the destruction or loss of properties and resources. Facilities, equipment and materials in stock were either destroyed or damaged during the disasters causing losses. Participant 15 mentioned that their delivery van was destroyed and parts of the business space they leased were damaged by a typhoon. The Covid-19 caused operations to stop or be disrupted. Participant 7, a retailer of agricultural fruits, vegetables, processed food, and Participant 14, a manager of a food processing firm, mentioned that the situation caused some of their raw materials and unsold goods to spoil. Similar sentiments were also aired by the other participants through their narratives as follows:

Some of our crops suffered from neglect and stunting as a result of labor shortages during lockdowns. This resulted to few and poor quality fruits. We almost went bankrupt because our products were destroyed and some stocks were eaten by the mice (Participant 10 – Vegetable farm owner and manager).

Our crops were destroyed during typhoons. It costs a lot because of the farm inputs, utilities and labor. Also rent because we have a separate rented farm. The losses are huge because the crops require a certain growing season before they are ready for harvest (Participant 13 – Vegetable farm owner and manager). We suffered huge losses as a large portion of our unsold goods in transit had gone to waste (Participant 8 – Marketing agent and shipping company owner).

Participant 10 clarified that because of a lack of labor and agricultural supplies, their crops—which had already been planted before the pandemic—were not properly cared for. Conversely, participant 8 took on the losses incurred when the pandemic first started and the products they were transporting spoiled en route to their destination due to blocked roadways.

Disruption of operations

Organizations are impacted by disasters in a similar way to individuals. Their business operations were disrupted or hampered in four key areas. First, the impact of disasters on their workforce also has an impact on the enterprises, as they are made up of human resources. Employees were unable to report because they were either displaced or impacted by the calamities. Physically reporting for work has been limited throughout the Covid-19 outbreak.

Our workforce was greatly reduced. During the first few weeks of lockdown, we felt the pressure as only 3 of our employees were able to report for work. It's a big challenge for our line of business as the chickens have to be feed regularly. When the lockdowns have eased, some of our workers coming from far areas had difficulty reporting back for work due to the limited transportation (Participant 2 – Poultry farm manager).

Covid has made managing human resources challenging. The department of labor pronouncements on “work from home” definitely did not apply to the company as work requires physical presence. There were numerous changes in work scheduling due to the unpredictable pronouncements of the local government and we found it hard to adjust everytime (Participant 3 – Vegetable farm assistant manager). Second, some roads and thoroughfares become impassable during natural disasters like typhoons, making it harder or more restricted to access raw materials. Logistics is limited during the pandemic, and suppliers have either closed or run out of stock. This was experienced by many of the participants such as Participants 14. Additionally, prices have increased.

The farm supply companies were closed at first. But we still had access to the materials and supplies, which were mostly farm inputs such as fertilizers, pesticides, seeds, etc. Thanks to our stocks but when they were all consumed, we were shocked because the prices increased dramatically due to the difficulty of logistics. Some were also out of stock and took a long time to be replenished (Participant 1 – Vegetable farm owner and manager).

It was difficult for us to maintain the usual crops we produce since some farm supplies and inputs were not accessible during the pandemic (Participant 3 – Vegetable farm assistant manager).

Logistics and transportation was a big problem. We had difficulty procuring and transporting materials and supplies as well as delivering our products to customers. There is paperwork we have to accomplish and strict regulations we have to comply (Participant 4 – Piggery and poultry farm owner).

Limited earning capacity

Logistics problems also the restricted sales and delivery of products as markets have either closed or had limited operations. Many suffered losses as the value chain was cut-off. Agribusinesses were particularly

hard hit as their products which were mostly perishables. This caused massive losses like Participant 10, a vegetable farm operator, who mentioned that their company lost almost 80% of their customers. One major challenge we encountered during the pandemic was the distribution of our produce. We used to have partner retail stores, groceries and restaurants ordering from us on a regular basis. During the pandemic, the orders from them were reduced to almost a quarter so we had to come up with strategies on how to dispose our produce since they have limited shelf-life (Participant 2 - Poultry farm manager). At first, our delivery trucks were not permitted to travel to the market establishments we supply in Manila. Later, transportation for food and necessities are allowed on a limited scale but it was pointless as the most of the markets were supplying vegetables closed. The ones that were open only bought smaller quantities (Participant 8 – Farm and food processing manager). Basically the supply chain of vegetable produce from farmers to the market or retailers in other provinces was cut-off (Participant 9 – Shipping firm owner). Regulations imposed on operating capacity during latter stages of the pandemic likewise limited the income potential of the Agri-tourism establishments. There were also production delays or shutdowns as a result of government-imposed travel restrictions, community quarantines, and testing. The local government is strict in monitoring tourism establishments. We are only allowed to accommodate a certain number of visitors per day to promote physical distancing and avoid overcrowding (Participant 5 – Cut flower farm with Agri-tourism services owner and manager). Our operation is regulated by the pronouncement of the local government. At first we were allowed to operate only 3 days in a week then it gradually increased (Participant 6 – strawberry farm with Agri-tourism services owner). Our operations were irregular. We close then open, then close again depending on the circumstances (Participant 12 – Marketing agent and shipping firm owner). Since the products of the agribusiness companies were food and essential agricultural produce, demand did not go down drastically. However, the covid-19 caused temporary shifts in consumption patterns for goods and services. Consumption of locally produced goods surged as a result of the restricted availability and rising cost of essential food items from other parts of the nation. This was observed for food products such as eggs, poultry, meat, fruits, and vegetables. For services, tourist destinations were more frequented by local tourists and visitors. When the government allowed the resumption of the transportation of goods, we were able to cope as the demand for shipping sky rocketed. As the transportation of vegetable produce of farmers lessened, it was compensated by the boom in shipping services for other goods (Participant 9). Our operation was affected at first. But then there was an increase in the demand of ornamental plants like cactus, succulents, orchids and the like. The increase was likely caused by prolonged lockdowns so people looked for ways not to get bored while at home (Participant 11 – Ornamental plants and agri-tourism supervisor). Participant 9, who runs a small shipping company for agricultural products, stated that during the pandemic, there was a sharp rise in the demand for freight and shipping services because so many households and businesses were unable to carry out the routine transfer of goods as before. In order to profit on the unexpected surge in demand, Participant 11, a farmer of vegetables, set aside a piece of the property for the growth of ornamental plants. Overall, the consequences resulted in the businesses suffering losses, losing clients or markets, and temporarily closing.

Strategies to cope up with the adverse effects

Five themes emerged with respect to the strategies employed by the MSEs in coping with the adverse effects of calamities. They enhanced their online presence, fostered more partnerships and collaborations with other companies, innovated their processes, introduced new products, and optimized their resources.

Enhancing online presence

With people staying at home during the lockdowns or community quarantines, they turned to social media to stay informed and connected with their family, friends and colleagues. As a result, social media and the internet environment became effective marketing channels. Some companies took advantage of this trend by establishing websites and leveraging social media platforms for advertising to stay connected with their customers. Participant 1 mentioned that they increased their presence in the different social media platforms for two reasons. First, as a means of product promotion, and second, as an avenue for client communication. Participant 1 added that online platforms such as Messenger serves as additional channel for communicating with suppliers, customers, and other business partners. It is crucial especially for responding to customer queries or concerns, as well as taking and processing their orders. Participant 6, on the other hand, mentioned that it is also a practical way for customers to find out the company's address and range of products. The other Participants had similar coping strategies as follows:

Since our farm-tourism service is new, social media has really helped in its advertisement. Our guests would post pictures in their social media accounts like Facebook, Instagram and Tiltok and this intrigues their friends and followers and soon they are flocking to our establishment. It creates “social media buzz” or word of mouth but through social media (Participant 5).

We also promoted our farm tourism using different social media platforms like Facebook... Thus there is little profit derived from the entrance fees but the idea is that it will attract more visitors who will in turn promote their experience to their friends and family through word of mouth and social media (Participant 11 – Ornamental plants and agritourism supervisor).

We informed people through a post on Facebook that they can buy our produce at discounted prices. Our friends helped in sharing the post and after only 3 days, around 70% of our products were sold. We had to give big discounts to encourage buyers (Participant 13 – Vegetable farm owner and manager)

Increasing partnerships and collaborations with other companies

Given the majority of the businesses' small size, their dependence on partner enterprises was essential. This was supported by Participant 8 stating that “the value of good partnership with suppliers, service providers and other companies can be felt during times of adversity.” Other participants shared the same sentiments as follows:

We have to continuously look for new one (markets and partner sellers) because demand can be unpredictable at times... Partnership and collaboration is important in any business. During times of crises like typhoons and the pandemic, even our competitors become our partners because we face the same challenges and can help each other overcome them (Participant 12).

A business needs other businesses to succeed. Strategic partnerships with suppliers, distributors, retailers, and the like will add value to production through improved operational efficiency and reduced cost, as well as increase the presence of company in the market. We had close contact with our partners to ensure

a smoother flow of operations especially during the pandemic where there are lots of uncertainties (Participant 14 – Food processing firm manager).

Participant 15 added that in order to receive information and training on disaster preparedness, obtain support, and share information, close coordination with the government is essential.

Innovating processes and services

Due to the shifting consumption patterns brought by calamities like Covid-19, the MSEs coped by adjusting to the changes. Some took advantage of the periods of temporary closure to improve their establishments and offer better services. Some managed to expand the range of goods or services they provide. The service oriented firms added new attractions and services to provide a complete package service to enhance client experience. For instance, Participant 6 set up extra attractions including statues, signage, and locations for photos in order to benefit their largely tourist clientele. They also installed a small souvenir shop with local products on display, as well as kiosks for light snacks and drinks including juice, milk tea, and coffee. Similarly, Participant 11 constructed extra infrastructure, including gazebos, fountains, and flower beds. As a promotional activity, their company also provided consumers with unlimited coffee and snacks. Actually, the admission fees people pay cover its cost.

We have to constantly re-invent ourselves. For instance, we built a small tree house as an added transaction... We actually focused on developing more of our farm tourism site since the demand for cut flowers has declined significantly during the pandemic. We instead used the flowering plants as the key feature our tourism farm (Participant 5 – Cut flower and agritourism farm owner and manager).

We strengthened our food processing as a fallback for our unsold farm produce. Most of our strawberry produce were processed into jam and other preserves as the demand for fresh strawberries has dwindled. At least the preserves had longer shelf lives which can be stocked and sold for a longer period of time (Participant 8 – Vegetable farm and food processing owner).

Participant 8 repurposed its unsold farm produce instead of letting it spoil. As getting out can be difficult, some of the enterprises saw the trend and devised strategies to make buying more convenient for the consumer.

We also provided free deliveries for a minimum amount of orders within the vicinity of the Municipality (Participant 1 – Vegetable farm owner and manager).

So it is important for a business to be flexible and employ strategies to suit the situation just as we did in making door-to-door deliveries even for small quantity orders. Eventually the convenience of deliveries became a trend even after Covid-19 (Participant 2 – Poultry farm manager)

Other made use of technology to upgrade their facilities to make operations more efficient like Participant 3. In order to address the issues caused by a shortage of labor, short reporting periods, and irregular work schedules, the company purchased extra farm equipment such water pumps, grass mowers, and automated sprinkler systems. To reduce their dependency on physical labor, it was an expensive but essential measure.

Introducing new products in line with current trends

Some of the MSEs took advantage of the shifting trends during the pandemic by offering new products like Participant 1. Others, like Participant 3, applied it as a preventative step to lessen losses, while Participant 14 did it to make the most of the in-season raw materials that were cheaper and accessible.

Yes, aside from the regular vegetables we produce, we allotted a small portion of the farm for ornamental plants, cactus and succulents. We noticed from social media that the demand for them has skyrocketed during the pandemic so we joined the band wagon and started propagating them. Because of the increase in demand, they were also able to command a good price. And indeed it was able to caution the losses we incurred a bit (Participant 1 – Vegetable farm owner and manager).

So we shifted to producing cash crops that required lesser farm inputs and shorter crop period. This was also in response to the local demand for fresh vegetables since transportation of produce from other areas were limited. It wasn't easy at first since it was something new for the company but we managed well after several crop cycles. In addition, the profit it generated were minimal but it is still better than incurring losses and keeping the land idle (Participant 3 – Vegetable farm assistant manager).

We tried innovating our products by introducing new variants which is usually adding new flavors or additives to the usual finished material. For instance, we combined guava, pineapple and mango, depending on the fruits in season, with our usual strawberry to create “four seasons” jam which is gaining attention from our customers (Participant 14 – Food processing firm manager).

Optimizing resources

To better survive the damaging effects of disasters, the majority of MSEs made the most of their scarce resources. Participant 4 took a more focused approach as opposed to offering more products, which would demand more resources, whereas Participant 2 discussed how their firm employed human resource optimization.

Our workforce was greatly reduced. During the first few weeks of lockdown, we felt the pressure as only 3 of our employees were able to report for work. It's a big challenge for our line of business as the chickens have to be feed regularly. When the lockdowns have eased, some of our workers coming from far areas had difficulty reporting for work due to the limited transportation. So we optimized our limited workforce by offering them paid overtime (Participant 2 – Poultry farm manager).

I think the key is focusing on key products or services and not trying to do so much... Spreading yourself to thinly to many products, services and other business ideas can be counterproductive especially when resources are limited. If disasters will strike, at least the company won't have to worry or be concerned with so many things (Participant 4 – Piggery and poultry farm owner).

Participant 10 went into great detail about how financial resources and spending are optimized, emphasizing that money for vital operations and core business processes should come first, with any excess going toward other uses.

Controlling expenses and prioritizing is important especially for a small business like ours. This will not only increase our income; we can also set aside some savings which we can access during times of need whether for emergency or to take advantage of an opportunity. Expenditures are endless in a business, so good financial management is a must in order to optimize funds. It's easy to get carried away by say expanding operations, buying a new equipment, and other decisions entailing significant outlay of funds, like in our case, but careful though has to considered before making these kinds decisions as it may affect the financial stability of the business. It is fine if the business has a fund or savings set-aside for it so it won't affect its day-to-day operations in case the business encounters some difficulties (Participant 10 – Vegetable farm owner and manager).

Other interventions to increase resilience

The participants believe that insuring properties, increasing capital and employing stricter monitoring of financial resources, as well as creating a contingency or disaster risk-reduction plan are other ways of improving the resilience of Agribusiness companies against calamities.

Insuring properties

Two participants emphasized the importance of having insurance coverage to mitigate the risk brought about by disasters.

Having crop insurance is really important. It may not recover the entire amount of loss when the crops are destroyed by calamities but at least it is mitigated. We did not insure our crops but our neighboring farms did so they suffered lesser amount of loss as a result (Participant 13 – Vegetable farm owner and manager). Our delivery van was destroyed by a fallen tree caused by the typhoon, fortunately, it had insurance coverage so we were able have it replaced with minimal additional cost (Participant 15 – Retail firm owner).

Increasing capital and employing stricter monitoring of financial resources

Better oversight combined with more funding can strengthen MSEs' ability to withstand disasters. Setting aside money for emergencies or allocating reserves for a calamity fund will act as a safety net for expenses incurred during natural disasters. Participants 10, 14, and 15 made this observation. In order to do this, Participants 10 and 11 discussed cost-cutting strategies both prior to and during emergencies.

Controlling expenses and prioritizing is important especially for a small business like ours. This will not only increase our income; we can also set aside some savings which we can access during times of need whether for emergency or to take advantage of an opportunity (Participant 10 – Vegetable farm owner and manager).

Land Bank of the Philippines and other commercial banks, through the government, can provide more loans with minimal interest to help establishments recover. Calamity loans are available during crises but they are only available for individuals (Participant 11 – Ornamental plants and agritourism supervisor).

As they say in finance, cash is king. Having spare funds like an emergency fund can be a life saver for a business in difficult times. Our firm also experienced some problems in the past due to weak cash management. Our financial statements indicate good profits but still we are having difficulty with expenditures. This problem was aggravated during the pandemic (Participant 14 – Food processing firm manager).

Creating a contingency or disaster risk-reduction plan

Larger companies prepare contingency plans or disaster risk-reduction plans which MSEs can adopt. The plan provides instructions on how to manage risks, including how to identify and classify them. It may also specify what should and shouldn't be done in case of an emergency. The accounts of participants 6 and 8 highlight its importance.

Having some sort of a risk management planning is vital. The planning and preparation can include management and employee training and information on crisis management, basic first aid or life support, and the like I believe are also essential (Participant 6 – strawberry farm with Agri-tourism services owner). For a medium sized company like us, having a disaster mitigation plan is really necessary. It can really help the company in coping through the action plans: that is what ought to be done in case of crises, what

to prioritize or focus on to lessen the impact or be able to cope up, and it can also recognize details which may be overlooked during the outset of a calamity or crisis due to panic and confusion (Participant 8 – Vegetable farm and food processing company manager).

Conclusion

The study concludes that most of the Agribusiness Micro and Small Enterprises (MSEs) use reactive techniques rather than adaptive ones. They strive to achieve resilience by adjusting to circumstances, demonstrating resourcefulness, and maximizing available resources. While they utilized a variety of coping mechanisms to manage the negative consequences, they still have a great deal of work to do before they can be considered resilient.

Recommendation

The researcher recommends that other MSEs benchmark on the findings and give more emphasis to preparation through contingency planning and crisis management strategies. Furthermore, it is also recommended to concerned government agencies and non-government organizations support these measures through relevant policies and programs.

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