

Vulnerability, Business Resilience, Mechanisms, and Challenges of Village (Barangay) Micro Business Enterprises in the New Normal

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Abstract. Micro, small, and medium-sized enterprises (MSMEs) and their employees have been particularly hard hit by the recession because of the COVID-19 pandemic. This study assesses the level of vulnerability and business resilience of two hundred seven (207) Village (Barangay) Micro Business Enterprises (BMBEs) in Bacolod City, Negros Occidental, Philippines. Likewise, it identifies the mechanisms, opportunities, and challenges of BMBEs in the new normal. Respondents of this study are from the wholesale and retail trade and food and beverage service sectors in Bacolod City who were selected using stratified random sampling. The descriptive-comparative research was used in the study and utilized both researcher-made and adapted questionnaires to gather data. Results showed that BMBEs had a moderate level of vulnerability and a high level of business resilience during the COVID-19 crisis. In terms of mechanisms and challenges, most BMBEs adopt technology for promotion purposes and have experienced insufficiency of cash flows to maintain operations. It can be concluded that the businesses were highly resilient during the COVID-19 crisis, as there is only a moderate extent of vulnerabilities from the BMBEs' internal operations. Businesses were able to absorb both internal and external shocks by adjusting to change and seizing opportunities.

Keywords. Village (Barangay) Micro Business Enterprises (BMBEs), MSMEs, Business Resilience, Vulnerability, Descriptive-Comparative, Philippines, New Normal

A. Introduction

The COVID-19 pandemic has far-reaching socioeconomic impacts threatening the existence of millions of businesses worldwide. Micro, small, and medium-sized enterprises (MSMEs) are the keystone of several economies worldwide, generating revenue and jobs for many people. They are perhaps the primary victims of the COVID-19 crisis (Shafi et al., 2020). They urgently need support to survive (United Nations, 2020). The ILO SCORE Program survey accounts for over 70% of global employment and 50% of GDP. Seventy percent of the 1,000 companies surveyed from eight countries on four continents had to cease operations. Half of the companies (50 percent) have temporarily shut down due to direct orders from authorities. In contrast, the other half have closed due to reduced orders, cases of employee COVID-19 infection, or, most unfortunately, permanent (International Labour Organization [ILO], 2020a).

In the Asia Pacific region, MSMEs significantly contribute to the economies. However, MSMEs struggle to survive in most Asia Pacific (APAC) regions due to reduced economic activity

and lockdowns. In contrast to large enterprises, MSMEs typically lack adequate financial and managerial resources and unprepared for such disruption (World Trade Organization, 2020).

In the Philippines, with more micro-scale, small-scale and medium-scale enterprises (MSMEs) emerging during the pandemic (Piad, 2021), the Department of Trade and Industry (DTI) has been doing its part in enforcing the Republic Act No. 9178, or the Barangay Micro Business Enterprise (BMBE) Law (Cuevas, 2017). The Barangay Micro-Business Enterprises (BMBEs) Act of 2002 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).

In the context of Negros Occidental, at least 119 micro and small enterprises in the province were afflicted by the COVID-19 crisis. They sought assistance from the Department of Trade and Industry's Enterprise Rehabilitation Financing (ERF) Program in May 2020 (Nicavera, 2020). Since the first quarantine level was raised in Bacolod City, at least 1,000 micro and small businesses have closed their stores. According to the Bacolod Employers Union, the first local organization composed mostly of small and micro enterprises, at least 40% of its nearly 500 members have closed their businesses (Mariveles, 2020). Nonetheless, micro-enterprises had more temporary business closures, no sales, and revenue than larger firms after the outbreak and lockdown imposed. It suggests dissimilar coping capabilities to the impact of firm size.

Particularly, the food services, which are part of the tourism industry, were more likely to have no yields in March 2020 due to tourism closures have contributed to the immediate revenue decline in this sector, were more likely to have made no wage payments to employees after the outbreak and were more likely to lack working capital (Shinozaki & Rao, 2021). According to Abrigo et al. (2020) of the Philippine Institute for Development Studies, wholesale and retail trade were among the most affected business sectors, with losses between P93.2 billion and P724.8 billion. Furthermore, MSMEs, including wholesale and retail trade and accommodation and food services, have decreased their employees' number by more than 20 percentage points lower (Shinozaki & Rao, 2021).

There is limited research on how organizations respond to a crisis such as COVID-19 (Tortato et al., 2022). For example, in Bacolod City, 10,775 BMBEs are registered as of the fiscal year of 2020. The challenges and closures of BMBEs were not fully studied except for studies documented in the local, regional, and national contexts, except for MSMEs.

It is crucial to take the necessary actions for BMBEs to recover. Business resilience planning ensures employees' ability to respond, including the company's capability to resume and restore to a pre-determined level of operation following a disruption. Thus, this research aimed to assess the level of vulnerability of village (Barangay) Micro Business Enterprises (BMBEs) in a highly urbanized city in the province of Negros Occidental and assess the level of business resilience of BMBEs in terms of proactive, responsive & adaptive, and reactive (strategic) capabilities. Primarily, the findings of the study may provide insights and micro underpinnings of resilience among small businesses and insights on how owner-manager resilience influences that of small businesses. Furthermore, the findings of the study may provide insights to the local government units (LGUs) by identifying the common indicators attributed to BMBE's vulnerability, thereby helping BMBEs' business resiliency in the new normal. In addition, the study results may provide a baseline for the City Government in formulating Business Resilience Plan (BRP) for Barangay Micro Business Enterprises (BMBEs).

B. Methodology

The descriptive-comparative research was used in the study. In this study, the researcher seeks to examine the difference in the level of vulnerability (People, Processes, Profits, and Partnerships) of BMBEs and the level of business resiliency (Proactive, Responsive & Adaptive, and Reactive) when they were grouped according to sectors, years in operation, ownership, and number of employees.

The respondents of this study were the 207 Barangay Micro Business Enterprises (BMBEs) in Bacolod City, Negros Occidental from wholesale and retail trade and food and beverage service sectors. The researcher gathered the official list of 10,775 BMBEs in Bacolod City as of the fiscal year

of 2020 from the Permits and Licensing Division of the City Government of Bacolod. Stratified random sampling was used. The sample size was obtained using Raosoft, an online sample size calculator.

This study utilized both researcher-made and adapted questionnaires to gather data. The survey questionnaire is composed of two parts. Part 1 illustrated the participants' demographic information, such as their industrial sector, ownership type, years of operation, and number of employees. The second part used a 5-point Likert scale to measure the Barangay Micro Business Enterprises (BMBEs) vulnerability and the level of business resiliency of the Barangay Micro Business Enterprises (BMBEs) based on different transformation drivers. Lawshe's (1975) Content Validity Ratio was used to develop the research instrument.

The index of content validity (CVI) result was 0.84. This implies that values range where $I-CVI > 0.79$ indicates that the item is relevant, and values that range between 0.70 and 0.79 implies that some items need revision, and if the value is below 0.70 implies that the item is removed (Rodrigues et al., 2017).

In addition, a pilot test was conducted with 30 BMBE respondents classified based on the three different sectors excluded from the study. Cronbach's alpha was used to assess the reliability or internal consistency of the research instrument's items. The reliability score of the research instrument was 0.82, which implied that the instrument has a very good level of reliability.

Descriptive and comparative analyses were used in the study. Frequency count, percentage distribution, and ranking were used to determine when assessors are classified according to sectors, ownership type, years in operation, and the number of employees.

To determine the level of vulnerability of the Barangay Micro Business Enterprises (BMBEs) to COVID-19 in terms of its impact on 4Ps: (a) people, (b) processes, (c) profits, and (d) partnerships; and to determine the level of business resiliency of the Barangay Micro Business Enterprises (BMBEs) in terms of (a) proactive, (b) responsive, and (c) reactive, the descriptive analysis was used with mean and standard deviation for statistical interpretation.

For the significant difference in the level of vulnerability and level of business resiliency of BMBEs, when assessors were grouped according to sectors, years in business, and the number of employees, normality test results were used. The normality test was conducted to determine if a parametric or non-parametric test would be employed for statistical treatment. Kolmogorov-Smirnov was utilized to determine the normality of all variables. The normality test revealed that the vulnerability variable [$KS=0.141$, $p=0.000$] and resilience variable [$KS=0.122$, $p=0.018$] are not normally distributed. Consequently, the Mann-Whitney U test was used to determine the significant difference in the level of vulnerability of BMBEs when grouped according to ownership type and several employees and Kruskal Wallis when grouped according to sector and years in operation.

C. Results and Discussion

1. Demographic Profile of the Respondents

Table 1 shows the demographic profile of the respondents. Most respondents were from the wholesale and retail trade ($f=116$; 56%), and the remaining were from the food and beverage service ($f=91$; 43.96%). Moreover, most of the ownership type were individual ($f=163$; 78.7%), most of their years in operation were within 1-2 years ($f=163$; 77.3), and a few operated for more than 5 years (6.8%). Lastly, most respondents have less than 10 employees ($f=193$; 93.2%).

Table 1. Demographic Profile of the Respondents

Variable	f	%
Wholesale and Retail Trade		
Fee or Contract Basis (FCB)	12	5.8
Agricultural Raw Materials and Live Animals (ARMLA)	26	12.6
Food, Beverages, and Tobacco (FBT)	24	11.6
Household Goods (HG)	25	12.1

Machinery, Equipment, and Supplies (MES)	25	12.1
Other Specialized and Non-specialized Wholesale and Retail (OSNWR)	4	1.9
<i>Total</i>	<i>116</i>	<i>56.04</i>
Food and Beverage Service		
Restaurants and Mobile Food Service Activities (RMFSA)	45	21.7
Event Catering and Other Food Service Activities (ECORSA)	36	17.4
Beverage Serving Activities (BSA)	10	4.8
<i>Total</i>	<i>91</i>	<i>43.96</i>
Ownership Type		
Individual	163	78.7
Non-individual	44	21.3
Years in Operation		
1-2 years	160	77.3
3-5 years	33	15.9
More than 5 years	14	6.8
No. of Employees		
Less than 10 employees	193	93.2
More than 10 years	14	6.8
Whole	207	100.0

The results imply that wholesale and retail trade contributed the most to gross city domestic product (GCDP) growth. Moreover, it can be implied that wholesale and retail trade is evident that it is primarily among the largest sector in the city. The finding also implies that the city remains a service-oriented economy, with leading services offered by sole proprietorship businesses, particularly wholesale, retail, and food service activities. Additionally, it is implied that the surveyed businesses were young startups, as operations were less than two years.

This is supported by the study of Shinozaki and Rao (2021), which shows that wholesale and retail trade and accommodation and food services were the second and third largest sectors among the respondents in the country. By firm size (total asset criterion) and sector, microenterprises in wholesale and retail trade held the largest share (22.0% of total microenterprises), followed by other services (17.9%), accommodation and food services (14.8%), and construction (8.3%). Small enterprises engaged in wholesale and retail trade were the highest (22.9% of total small enterprises), followed by accommodation and food services (13.5%), manufacturing (11.7%), and other services (10.5%).

This is also supported by the Bangko Sentral ng Pilipinas's (BSP, 2018) Consumer Finance Survey, though only a few Filipino households were into entrepreneurial activities, most of which were sole proprietorship (91.2%), and forty-six percent were relatively new and were operating for less than 5 years. In terms of industry, 75.4 percent were engaged in services. Furthermore, wholesale and retail trade were the primary business under the services sector, followed by accommodation and food service activities. Similarly, Shinozaki and Rao (2021) reported that 59.6% of their surveyed MSMEs were young starts that belonged to microenterprises with an operation between 0 and 5 years.

2. Level of Vulnerability of BMBEs

When taken as a whole, Table 2 presents the level of vulnerability of BMBEs in terms of People, Processes, Profits, and Partnerships. The business vulnerability level during the COVID-19 crisis for businesses is moderate ($M = 3.31$, $SD = 0.62$).

Table 2. Level of Vulnerability of BMBEs

Variable	People			Process			Profits			Partnerships			Vulnerability		
	M	SD	Int	M	SD	Int	M	SD	Int	M	SD	Int	M	SD	Int
Wholesale and Retail Trade															
FCB	3.28	1.13	Mo	3.25	0.78	Mo	3.43	0.76	Hi	3.40	0.81	Mo	3.36	0.77	Mo
ARMLA	2.62	0.78	Mo	2.75	0.76	Mo	3.09	0.61	Mo	3.06	0.68	Mo	2.92	0.56	Mo
FBT	2.82	0.93	Mo	3.17	0.72	Mo	3.30	0.64	Mo	3.10	0.72	Mo	3.13	0.58	Mo
HG	3.30	0.49	Mo	3.31	0.40	Mo	3.35	0.43	Mo	3.10	0.40	Mo	3.27	0.23	Mo
MES	3.69	0.85	Hi	3.66	1.00	Hi	3.56	0.77	Hi	3.53	0.72	Hi	3.60	0.73	Hi
OSNWR	3.30	1.21	Mo	3.50	0.84	Hi	4.08	0.51	Hi	3.75	0.97	Hi	3.73	0.52	Hi
Food and Beverage Service															
RMFSA	3.22	0.71	Mo	3.42	0.71	Hi	3.69	0.67	Hi	3.42	0.78	Hi	3.48	0.60	Hi
ECOFSA	3.24	0.59	Mo	3.28	0.59	Mo	3.67	0.53	Hi	3.44	0.41	Hi	3.45	0.44	Hi
BSA	2.30	0.74	Lo	2.62	0.63	Mo	2.63	0.96	Mo	2.80	1.13	Mo	2.60	0.82	Lo
Ownership Type															
Individual	3.06	0.82	Mo	3.20	0.73	Mo	3.41	0.72	Hi	3.26	0.74	Mo	3.26	0.63	Mo
Non-individual	3.40	0.80	Mo	3.44	0.82	Hi	3.60	0.59	Hi	3.42	0.57	Hi	3.48	0.58	Hi
Years in Operation															
1-2 years	3.17	0.79	Mo	3.32	0.73	Mo	3.50	0.68	Hi	3.33	0.68	Mo	3.36	0.60	Mo
3-5 years	3.15	0.88	Mo	3.01	0.79	Mo	3.31	0.67	Mo	3.24	0.80	Mo	3.20	0.63	Mo
More than 5 years	2.61	0.99	Mo	3.01	0.90	Mo	3.17	0.87	Mo	2.92	0.78	Mo	2.97	0.73	Mo
No. of Employees															
Less than 10 employees	3.13	0.82	Mo	3.27	0.73	Mo	3.48	0.67	Hi	3.29	0.71	Mo	3.32	0.61	Mo
More than 10 years	3.06	0.96	Mo	3.04	1.04	Mo	3.10	0.90	Mo	3.26	0.78	Mo	3.12	0.82	Mo
Whole	3.13	0.83	Mo	3.25	0.76	Mo	3.45	0.69	Hi	3.29	0.71	Mo	3.31	0.62	Mo

Note: 1.00-1.80=Very Low (VL), 1.81-2.60=Low (Lo), 2.61-3.40=Moderate (Mo), 3.41-4.20=High (Hi), 4.21-5.00=Very High (VH)

The results imply that the city government has provided an avenue for micro-enterprises and entrepreneurs to generate additional income amid the pandemic (Panay News, 2021), including rehabilitation through funding sources or financing intervention (Nicavera, 2020). Moreover, business owners and workers' groups in the city have pushed for selective lockdowns and intensified quarantine mechanisms instead of tightening health and security measures to contain the spread of coronavirus disease (COVID-19). However, tightened health and security measures were necessary to contain the spread of coronavirus disease (COVID-19). A total city lockdown can practically erase economic activity (Burgos, 2020).

This is supported by the study of Dua et al. (2020) that small businesses having a "significant negative effect" under COVID-19 may be forced to close. At the high end, 25% of small enterprises could face closure due to a "moderate negative effect." When this small business accounted for almost all permanent closings, it was projected that without effective interventions, a quarter to around 40% of small businesses with a staff of 20 or fewer could be vulnerable to a permanent shutdown in the first four months of the COVID-19 crisis, contrasted to less than 5% of firms with 100 to 499 employees.

Laorden et al. (2022) recommend that businesses establish strategic collaboration across different stakeholders, particularly through public, private, and non-government organizations, and academic collaboration to enhance their capabilities.

In terms of areas, specifically, Profits (M=3.45, SD=0.69) obtained the highest mean, implying that the business's vulnerability level during the COVID-19 crisis is high. Followed by Partnerships (M=3.29, SD=0.71) and Process (M=3.25, SD= 0.76) with a moderate level of vulnerability. Whereas People obtained the lowest mean (M=3.13, SD=0.83), implying that the level of vulnerability of the business to the COVID-19 crisis in this aspect is moderate.

The results implied that it is very evident that the pandemic has negative economic impacts, such as economic losses for businesses. This is attributable to lockdown measures and public prevention strategies (de Lara-Tuprio et al., 2022). Many of these closures may be permanent because owners cannot make ongoing payments and survive the shutdown. Even temporary closures induced by the epidemic are troublesome since they reflect income losses for business owners during those

months of inactivity. The discovery of early-stage losses to small business activities has significant consequences for income losses (Fairlie, 2020).

This is supported by the study of Hidalgo et al. (2021), that the pandemic had a negative impact on business establishments in the country, particularly at the firm level (such as a decline in employee compensation, revenue loss, crunches in liquidity, the prolonged period for collection, canceled projects, delayed projects, among others. Furthermore, it also entailed additional costs and investments needed to comply with the protocols and safety on health and safety. Furthermore, Bustillo et al. (2022) also inferred that the lockdowns and movement restrictions affected small businesses the most. Prior to the Covid-19 epidemic, small businesses performed better financially. Thus, if the much-needed focus and aid are given to small enterprises in the industrial sector, such businesses may have thrived better in the face of crises and economic uncertainty.

Moreover, in terms of demographics and when grouped according to Ownership Type, non-individual ownership has a high level of vulnerability ($M=3.48$, $SD=0.58$) compared to individual ownership ($M=3.26$, $SD=0.63$), resulting in only a moderate level of vulnerability. Particularly, the Profit ($M=3.41$, $SD=0.72$) aspect of non-individual ownership businesses scored a high level of vulnerability. When grouped according to Years in Operation, those businesses operating within 1-2 years obtained the uppermost level of vulnerability ($M=3.36$, $SD=0.60$), which implies a moderate level of vulnerability compared to 3-5 years ($M=3.20$, $SD=0.73$) and more than 5 years in operation ($M=2.97$, $SD=0.73$).

The Profit aspects of business operating within 1-2 years, among other dimensions, were the most vulnerable, indicating a high level of vulnerability ($M=3.50$, $SD=0.68$). When grouped according to the Number of Employees, those businesses with less than 10 employees obtained the uppermost level of vulnerability ($M=3.32$, $SD=0.61$), which implies a moderate level of vulnerability compared to more than 10 employees ($M=3.12$, $SD=0.82$). Particularly, the Partnerships aspects of those businesses with less than 10 employees, among other dimensions, were the most vulnerable, indicating a high level of vulnerability ($M=3.29$, $SD=0.71$).

The per ownership type sector classification results imply that non-individual owners rated significantly higher vulnerability than individual owners. Therefore, it is possible to assume that shared enterprises may have more capacities, particularly in terms of financial assistance to overcome obstacles in crises (Yaghoubi et al., 2022). Banks perceive small businesses to be riskier during crises, which explains why financing conditions are tighter. This appears to apply primarily to enterprises not previously part of the corporate clientele (Eggers, 2020).

The study finding is also similar to the research study of Yaghoubi et al. (2022). Their study results also showed differences in the ownership structures of the two groups of active and closed MSEs, with the majority of active MSEs (66.7%) having shared ownership and the majority of closed MSEs were shared ownership (24.7%) and most of them having sole proprietorships (76.3%).

However, this is contrary to the study report of Shinozaki and Vandenberg (2021) of the Asian Development Bank (ADB) in their key findings on the impact of the COVID-19 pandemic on Philippine businesses. There was a clear correlation between business closures and firm size. Temporary closures were most widespread among microenterprises (71.2% of total microenterprises), followed by small enterprises (63.2%), medium-sized enterprises (57.4%), and large enterprises (53.8%). Among large enterprises, 7% remained fully operational, while 38.2% stayed partially open. The smaller the firm size, the lower the share of businesses remaining open: medium-sized (5.1%), small (3.7%), and microenterprises (3.3%).

The same was true for those partially open: medium-sized (36.3%), small (32.5%), and microenterprises (24.1%). Only a small fraction of enterprises surveyed permanently closed: 1.3% of microenterprises, 0.6% of small, 1.2% of medium-sized, and 1.1% of large enterprises. This is also supported by the study of The United Nations Conference on Trade and Development (UNCTAD, 2022) that in most countries, government support measures for individual businesses are mainly targeted toward registered legal entities, with informal enterprises excluded. In the Philippines, the Magna Carta for Small Enterprises (in effect prior to COVID-19) requires all lending organizations to

allocate 5% of their lending portfolio to SMEs under particular circumstances, one of which is that only officially recognized MSMEs are eligible to be considered for assistance.

Furthermore, in terms of Years in Operation, those businesses operating within 1-2 years obtained the uppermost level of vulnerability. The Profit aspects of businesses operating within 1-2 years, among other dimensions, were the most vulnerable, indicating a high level of vulnerability. This is in conjunction with the study report of Shinozaki and Rao (2021) of the Asian Development Bank (ADB) in their key findings on the impact of the COVID-19 pandemic on the Philippine MSME businesses. By age, MSMEs that had operated for over 6 years were less likely to lack working capital than those that had operated for up to 5 years.

However, this was not statistically significant except for MSMEs operating for 11–15 years (15.1 percentage points lower at the 10% significance level). This suggests that young startups faced a more serious lack of funds during the pandemic. The gender of MSME owners and firm size produced no statistically significant results.

The lockdown immediately affected young firms (operating for up to 5 years), causing no sales and business closures. Longer-established MSMEs (operating for over 31 years) did not immediately close their business and maintained some sales in the first month following the lockdown, but they tended to lose revenue. MSMEs operating for 11–15 years had more working capital but initiated wage cuts to save funds to survive. Young startups faced a more serious lack of funds for survival during the pandemic (Shinozaki & Rao, 2021).

When grouped according to the Number of Employees, those businesses with less than 10 employees. Particularly, the Partnerships aspects of those businesses with less than 10 employees, among other dimensions, were the most vulnerable, indicating a high level of vulnerability. Dua et al. (2020) of McKinsey and Company reported that small business owners are particularly vulnerable. A quarter to about 40% of small businesses with fewer than 20 employees may be vulnerable to permanently closing in the first four months of the COVID-19 crisis, according to our analysis of previous recessions, when these companies accounted for most permanent closures. This contrasts with less than 5% of businesses with 100 to 499 employees. Even if those bigger businesses do not go out of business completely, they might drastically reduce employment or close many locations.

Whereas, in the aspect of Partnerships of companies with less than 10 employees, it can imply a high vulnerability as there has been "negative or sudden change of regulations (i.e., laws and regulations) that negatively impact the business enterprise. Engidaw (2022) argued that the ability to develop measures to address social distancing regulations for operating and reopening during the pandemic is more likely to be available to larger firms due to their greater size, commercial and legal structure, and returns to scale. Although the government is not providing various support and ways to solve this difficulty, more small enterprises are running, and it is tough to survive in the current crisis.

3. Level of Resilience of BMBEs

Table 3 presents the level of business resilience of BMBEs in terms of Proactive Capabilities, Responsive and Adaptive Capabilities, and Reactive Capabilities. When taken as a whole, the level of business resilience of BMBEs during the COVID-19 crisis is high (M = 3.64, SD = 0.56).

Table 3. Level of Resilience of BMBEs

Variable	Proactive Capabilities			Responsive and Adaptive Capabilities			Reactive Capabilities			Resilience		
	M	SD	Int	M	SD	Int	M	SD	Int	M	SD	Int
Wholesale and Retail Trade												
FCB	3.67	0.42	Hi	3.55	0.53	Hi	3.34	0.65	Mo	3.51	0.27	Hi
ARMLA	3.98	0.44	Hi	4.22	0.81	VH	4.32	0.84	VH	4.18	0.64	Hi
FBT	3.51	0.75	Hi	3.50	0.71	Hi	3.31	0.77	Mo	3.43	0.56	Hi

HG	3.85	0.44	Hi	3.70	0.59	Hi	3.47	0.60	Hi	3.66	0.47	Hi
MES	3.82	0.47	Hi	3.65	0.64	Hi	3.87	0.76	Hi	3.78	0.52	Hi
OSNWR	4.25	0.46	VH	4.25	0.53	VH	4.45	0.72	VH	4.32	0.46	VH
Food and Beverage Service												
RMFSA	3.29	0.58	Mo	3.61	0.51	Hi	3.82	0.61	Hi	3.60	0.48	Hi
ECOFSA	3.23	0.54	Mo	3.49	0.51	Hi	3.47	0.47	Hi	3.41	0.44	Mo
BSA	2.98	0.36	Mo	3.50	0.41	Hi	3.30	0.70	Mo	3.28	0.44	Mo
Ownership Type												
Individual	3.54	0.64	Hi	3.65	0.66	Hi	3.63	0.76	Hi	3.61	0.58	Hi
Non-individual	3.60	0.52	Hi	3.77	0.54	Hi	3.87	0.62	Hi	3.76	0.46	Hi
Years in Operation												
1-2 years	3.54	0.57	Hi	3.69	0.62	Hi	3.77	0.68	Hi	3.67	0.52	Hi
3-5 years	3.66	0.66	Hi	3.73	0.62	Hi	3.48	0.80	Hi	3.62	0.56	Hi
More than 5 years	3.36	0.90	Mo	3.37	0.87	Mo	3.21	0.96	Mo	3.31	0.82	Mo
No. of Employees												
Less than 10 employees	3.56	0.60	Hi	3.68	0.63	Hi	3.71	0.72	Hi	3.66	0.55	Hi
More than 10 employees	3.38	0.79	Mo	3.54	0.79	Hi	3.40	0.92	Mo	3.44	0.70	Hi
Whole	3.55	0.61	Hi	3.67	0.64	Hi	3.68	0.74	Hi	3.64	0.56	Hi

Even though the pandemic disproportionately impacted local entrepreneurs, they displayed the tenacity to flourish in the face of adversity. Despite major social-cultural and infrastructural constraints, local enterprises have performed remarkably well in terms of entrepreneurial progress. Among other things, there is a lack of government support and access to entrepreneurial capital. The findings imply that when business activities are limited due to health precautions, building capacities and competencies for future growth prospects is a top priority (Gregurec et al., 2021). Businesses have used a variety of resilience-related approaches to turn crisis-induced misfortune into an opportunity (Engidaw, 2022).

This is supported by the study of Duchek (2020) that organizations must have both proactive and reactive capabilities. They must also be capable of dealing with both cognitive and behavioral challenges. They identify a company's prior knowledge and understanding as one of the most important determinants, resource availability, social capital, and power and authority as the most critical drivers/sources of resiliency.

The pandemic has caused enormous changes globally and in management, from formulating new company dynamics and consumer analysis and marketing strategies. In this context, the need for innovation is emphasized again, with managers able to respond to the market's digital revolution to recoup or boost sales following COVID-19 (Piccarozzi et al., 2021). Long-term measures such as business continuity planning and growth strategies such as market penetration, diversification, and transformative initiatives were demonstrated by resilient organizations (Eggers, 2020).

In terms of areas, all were deemed high resilience. Specifically, Reactive Capabilities ($M=3.68$, $SD=0.74$) obtained the highest mean, implying that the business's resilience level during the COVID-19 crisis is high. Followed by Responsive and Adaptive Capabilities ($M=3.67$, $SD=0.64$) and Proactive Capabilities ($M=3.55$, $SD=0.61$) with a high level of resilience.

The reactive phase refers to the responsiveness to customers' needs, responsiveness to competitors' strategies, multi-sourcing, public-private collaboration, capacity to self-renew over time

through innovation, and business confidence (Hadi, 2020). The results imply that while the COVID-19 epidemic is widely regarded as having had a negative impact on enterprises, it may have helped some in the long run. These rebuilt businesses have become antifragile by innovating in products, processes, and business models to continue serving their economic and social goals (Habaradaras, 2021). Moreover, businesses strengthened their collaboration and networks with other organizations and government bodies (Ballesteros & Domingo, 2015).

This is supported by the study of Behera et al. (2020) that MSMEs have grown in importance in recent years due to their ongoing contribution to employment and income growth through export profits and their ability to respond to market changes and creative practices in local or global domains. According to Gregurec et al. (2021), during this pandemic, the impact of challenges may be amplified. Consumers' requirements, buying patterns, decision-making, and habits have shifted demand patterns as more people work from home. New services, new delivery models, innovative ways and channels for consumption services, new community collaboration possibilities, and anything else that affects consumers' value proposition needs, and expectations are all needed.

In terms of demographics, when grouped according to Ownership Type, non-individual ownership has a high level of business resilience ($M=3.76$, $SD=0.46$) compared to individual ownership ($M=3.61$, $SD=0.58$). When grouped according to Years in Operation, those businesses operating within 1-2 years obtained the uppermost level of business resilience ($M=3.67$, $SD=0.52$), which implies a high level of business resilience compared to 3-5 years ($M=3.62$, $SD=0.56$) and more than 5 years in operation ($M=3.31$, $SD=0.82$). When grouped according to the Number of Employees, those businesses with less than 10 employees obtained the uppermost level of business resilience ($M=3.66$, $SD=0.55$), which implies a high level of business resilience compared to more than 10 employees ($M=3.44$, $SD=0.70$).

The findings imply a clear correlation between business closures and firm size. Temporary closures were most widespread among microenterprises, followed by small, medium-sized, and large enterprises (Shinozaki & Vandenberg, 2021). Following them is a class of micro-enterprises (also known as self-employed people) that rely largely on their micro business, such as tiny store owners, domestic companies, and street sellers. Family members typically run these enterprises in various fields. Furthermore, these micro-businesses are classified as part of the informal economy. The findings revealed that one might immediately determine the severity of the impact of the COVID-19 outbreak on micro-enterprise.

The study's findings suggest that entrepreneurial resilience has a major impact on MSME company success in the face of the COVID-19 pandemic. In other words, when changes occur, such as the COVID-19 epidemic, the business owner's ability to adapt is necessary to survive (Sari et al., 2022).

Moreover, as stated above, non-individual ownership has a high level of business resilience compared to individual ownership, and this is also supported by the study of Shafi et al. (2020) that because many small business owners do not own the shop they operate, they are still obligated to pay rents during the time of lockdown, posing an economic burden on the small business owners.

Hadjielias et al. (2022) also concurred that individual resilience had highlighted the significance of owner-manager resilience in understanding small business resilience. Despite the scarcity of research on the impact of owner-manager resilience on family business resilience, long-term family ownership orientation and a desire to pass the business down to future generations have been identified as providing the social, financial, and emotional capital needed to successfully deal with emergencies.

This is also supported by the study of Sari et al. (2022) that the capacity of business owners to manage their firm alone is insufficient due to the dynamics of external influences that business owners cannot predict, such as the COVID-19 pandemic issue. In terms of firm owners' resilience and self-efficacy in this time of crisis, creativity, and invention are required to control and overcome their reactions to the business they run. Furthermore, external assistance is required, such as from the government and other appropriate supporting parties, such as chambers of commerce and training

providers for MSME owners. The government can implement rules that will help MSMEs survive the COVID-19 pandemic. Government policies directly impact the internal variables of businesses (human resources, finance, manufacturing technology, market, and marketing). Other external elements, such as socio-cultural and associated institutions, directly impact small business performance.

In addition, when grouped according to sector, in the Wholesale and Retail Trade Sector, Other Specialized and Non-specialized Wholesale and Retail obtained the highest mean ($M=4.32$, $SD=0.46$), which implies that the level of business resilience of the business during the COVID-19 crisis is very high. All aspects, such as Proactive Capabilities ($M=4.25$, $SD=0.46$), Responsive and Adaptive Capabilities ($M=4.25$, $SD=0.53$), and Reactive Capabilities ($M=4.45$, $SD=0.72$) scored very high resilience for the Other Specialized and Non-specialized Wholesale and Retail.

While Food, Beverages, and Tobacco obtained the lowest mean ($M=3.43$, $SD=0.56$), which still implies a high level of business resilience during COVID-19. Particularly, aspects such as Proactive Capabilities ($M=3.51$, $SD=0.75$), Responsive and Adaptive Capabilities ($M=3.50$, $SD=0.71$) scored high resilience, while their Reactive Capabilities ($M=3.31$, $SD=0.77$) was moderate resilience.

The findings imply that both sectors have their diversification as a survival and resilience strategy. Nevertheless, results imply that the Wholesale and Retail Trade Sector has made extensive preparations for a crisis compared to Food and Beverage service sector, which have moderate preparations.

This is supported by the study of Belhadi et al. (2021) that other service industries that rely largely on movement will be the first to be impacted. Others, such as retail, may see a decline in demand but remain largely self-contained. As a result, we anticipate that the response techniques employed to manage supply chain risks induced by the current epidemic will differ.

The food and beverage sector had a major economic and employment crisis due to the COVID-19 pandemic in early 2020 (Gomes et al., 2022). Due to COVID-19, consumers of food service enterprises have undergone and will continue to experience significant changes. First, consumers have not been able to enjoy in-dining experiences due fully or at least partially to lockdown or severe limits on in-dining food services during the epidemic. Many customers were and still are hesitant to eat out in a restricted food service environment due to the risk of COVID-19 transmission, despite the lack of regulatory limitations on the practice. Additionally, even though the vaccination rate is sharply rising, some customers either decline immunization, avoid eating out, or do not feel secure enough to do so even after vaccination (Lee & Ham, 2021).

4. Mechanisms and Challenges

Table 4 presents the mechanisms and challenges faced by BMBEs during the COVID-19 pandemic. In terms of Mechanisms (Coping Strategies), the majority of the BMBEs have the adoption of technology for business communication for promotion purposes or digital marketing ($f=190$; 91.8%), followed by continuous improvement of existing products/services ($f=193$; 88.4). However, only a few had sold off assets early due to uncertainties in the market during the current situation ($f=93$; 44.9%).

Table 4. Mechanisms and Challenges

Mechanisms (Coping Strategies)	f	%
1. Adoption of technology for business communication for promotion purposes or digital marketing.	190	91.8
2. Continuous improvement of existing products/services.	183	88.4
3. Use of advanced equipment or technology to reduce the amount of work.	179	86.5
4. Selling a higher volume of goods/products that are in demand.	177	85.5
5. An economical offering packages that are attractive to consumers.	169	81.6
6. Increased prices of items/products that are classified as essential business.	156	75.4
7. Tracking down opportunities and diversifying into new product categories.	154	74.4

8. Selling a lower volume of goods/products.	141	68.1
9. Continuing credit arrangements or extending fresh sales on credit facilities to loyal customers.	138	66.7
10. Reduction of operating costs such as retrenchment of staff or enforcement pay cut.	133	64.3
11. Implementation of flexible working hours such as remote work or telework.	130	62.8
12. Borrowing from the social network to smoothen the cash flow requirements of the business.	95	45.9
13. The hiring of new staff.	95	45.9
14. Selling off assets early due to uncertainties in the market during the current situation.	93	44.9
Challenges (Issues or Concerns)	f	%
1. Ability to obtain sufficient cash flow to maintain operations.	186	89.9
2. Customers have been affected, and demand is below normal.	181	87.4
3. Ability to obtain sufficient equipment and materials.	177	85.5
4. Effectiveness of the government regarding the stimulus package and assistance for businesses.	176	85.0
5. Business partners or suppliers have been affected and are not operating normally.	173	83.6
6. Experiencing problems with transportation and logistics.	163	78.7
7. Inputs, materials, or suppliers have become expensive.	159	76.8
8. Re-training/re-skilling employees.	148	71.5

The COVID-19 epidemic has resulted in substantial environmental changes, encouraging businesses to adopt digital technology on a larger scale and under time constraints. Firms attempted to implement it in a couple of days since the longer it takes, the greater the gap between the adjustments required in the business environment (Priyono et al., 2020). Indeed, the COVID-19 pandemic has significantly impacted the business operations and performance of micro, small, and medium-sized companies (MSMEs) worldwide. MSMEs have had to embrace and implement various tactics to sustain their businesses. Their financial and sustainability performance has been influenced by their platforms and digital marketing (DM) strategies (Gao et al., 2023). The results of the study imply that small businesses understand the benefits of digital marketing. The pandemic brought about substantial changes, particularly in marketing, which led to the rise of digital usage.

This is supported by the report of the World Bank Organization (2021) on the impact of the pandemic on business in the Philippines that new or increasing usage of digital platforms has halted, notwithstanding a progressive increase in the share of online sales and workers under remote work arrangements. In the poll, around 54 percent of enterprises began or increased their usage of digital platforms.

As asserted by Priyono et al. (2020) that no company can achieve success by depending solely on an existing business model since they are constantly under pressure from external factors to reinvent it using digital technologies. Meanwhile, many conventional firms embark on a digitalization path toward more digitalized business models, incorporating digital technologies in all functions to support their operations. Priyono et al. (2020) concluded that businesses could take three key approaches to become a digitalized firm: speeding digitalization, digitalizing sales functions, and finding digital partners to reach the market. The decision to choose one of the three digital transformation paths is influenced by factors such as current digital maturity, learning culture, and the history of digital technology adoption. For example, businesses that make customized items on a wide scale and have a huge physical size might overcome poor digital literacy concerns by working with digital enterprises as a shortcut. Meanwhile, direct client engagement is critical for other product

kinds. As a result, digitalization of the sales function is required. This function's digitization not only increases sales but also improves customer experience.

Whereas, in terms of Challenges, the majority of the BMBEs have experienced insufficient ability to obtain sufficient cashflow to maintain operations (f=186; 89.9%), followed by customers have been affected, and demand is below normal (f=181; 87.4%), and the inability to obtain sufficient equipment, and materials (f=177; 85.5%).

The findings of the study imply that due to insufficient ability to obtain sufficient cash flow to maintain operations, thus workers are the hardest hit by the pandemic.

This is supported by the news report of Espina (2021) and the statement of the vice president for the Visayas of the Philippine Chamber of Commerce and Industry that only half of Bacolod's workforce is still employed. Companies have had to lay off employees due to a 70% drop in sales. A scarcity of vaccines, a succession of lockdowns, closures due to workplace outbreaks, and consumer concerns have combined to produce a perfect economic storm. As a result, business owners nowadays do not spend more than their daily revenues. Companies used to create financial estimates for up to ten years in advance, but "now it's day to day."

Similarly, Monzon (2023) reported that in a Manulife Philippines survey, 41% of respondents began business during the epidemic, with only 50% saying they are highly likely to continue operations in the new normal. This is also supported by the report of the World Bank Organization (2021) on the impact of the pandemic on business in the Philippines, which shows that consistently poor sales performance has strained organizations' liquidity and solvency. 63% of enterprises in the poll had less than a month's cash on hand; 89% have altered loan terms or schedules; 51% have fallen behind on payments; and 28% plan to fall behind soon. The top impediments to finance were a lack of guarantee or collateral and market uncertainty. The risk of payment delays remained significant, and one-third of enterprises anticipate filing for bankruptcy within the next six months.

The report of the World Bank Organization (2021) on the impact of the pandemic on business in the Philippines also stated granular evidence suggests that higher use intensity (intense margin) drove increases in digital technology use in response to the pandemic, with relatively fewer new adopters (extensive margin). For example, whereas 54 percent of businesses reported increased usage of digital platforms for sales and payments, only 10% did not utilize these platforms before the epidemic and began using them in response to the crisis. The biggest barrier to the broader adoption of innovative digital solutions has been recognized as a lack of financial resources.

The study by Chowdhury et al. (2020) supports this. Also, it states that regarding other immediate effects, it is evident that businesses are currently experiencing a lack of working capital, given that their operating expenses are greater than their sales revenues. To increase sales, managers identify and employ every feasible tactic. Focusing on online sales is the most viable strategy. By reducing the issue of the liquidity crisis, expanding sales channels can aid businesses in covering operational costs. Nadyan et al. (2021) also stated that MSMEs aim to stay in business by utilizing E-Commerce and digital marketing to advertise their goods. They are also working to improve the quality of their goods and services, pricing structures, promotional strategies, and product differentiation.

In the demanding and competitive market climate brought on by the COVID-19 pandemic, product market rivalry has become a global problem for enterprises (Liu et al., 2022). According to Pantano et al. (2020), to such an extent that they might leave a mark even after the emergency is over, the profound changes being experienced on a global scale are challenging consumers' perceptions and behaviors in retailing. First, customers might stop shopping at their regular retailers in favor of rivals because of proximity to one another or because an emergency forced them to reevaluate their routines due to unavailable inventory (or lack thereof).

Second, customers may continue to shop at the businesses that aided them during the crisis and form a bond with those establishments. Third, as customers examine their purchasing patterns, they learn about the advantages of services they had never utilized. For instance, older consumers make purchases online that they had never considered previously because of learning about the security and

advantages of home deliveries, shop pickups, and cashless transactions. Several countries have designated online shopping and home deliveries as "vital services" in this emergency.

Furthermore, the report of Mehrotra et al. (2020) presents a complete country-level analysis of COVID-19's impact on Philippine MSMEs. The researchers stated that the MSME strategy was to increase the price, sell on demand, or sell something new based on the study results. While some MSMEs were looking for new product categories to diversify into, others were already selling in-demand goods. MSMEs either extended the credit arrangement or offered new sales to their devoted customers on credit. Additionally, several business owners were obliged to sell assets early due to the unpredictability of the current market conditions.

5. Difference in the Level of Vulnerability

Table 5 presents the significant difference in the level of vulnerability of BMBEs when grouped according to sectors, years in operation, ownership type, and the current number of employees.

Table 5. Difference in the Level of Vulnerability of BMBEs

Variable	U	z	P
Ownership Type	2825.500*	-2.158	0.031
No. of Employees	1111.000	-1.110	0.267
Variable	χ^2	df	P
Sector	48.514*	8	0.000
Years in Operation	6.678*	2	0.035

Note: *difference is significant when $p \leq 0.05$

Kolmogorov-Smirnov was used to determine the normality of the variables. The normality test revealed that the variable vulnerability [KS=0.141, $p=0.000$] and resilience [KS=0.122, $p=0.018$] are not normally distributed. Mann Whitney U test was used to determine the significant difference in the level of vulnerability of BMBEs when grouped according to ownership type and several employees, and Kruskal Wallis when grouped according to sector and years in operation.

Findings showed no significant difference in the level of vulnerability of BMBEs when grouped according to the number of employees [U=1111.0, $p=0.267$]. The results can imply that all BMBEs, regardless of their classifications, were impacted by the COVID-19 pandemic in terms of vulnerability in employee management. As most businesses were temporarily closed, there was also a large reduction in employees.

This is supported by the findings of Engidaw (2022) that even when firms stay open, employees face financial hardship due to lost jobs or fewer hours worked. It is crucial to remember that when a firm fails or needs to lay off employees, it affects a whole community of individuals who rely on job income to sustain themselves and, in turn, other local organizations and companies.

Particularly, there was a significant difference in the level of vulnerability of BMBEs when grouped according to ownership type [U=2825.5, $p=0.031$], sector [$\chi^2(8) = 48.514$, $p=0.000$], and years in operation [$\chi^2(2) = 6.687$, $p=0.035$]. Regarding ownership type, non-individual owners rated significantly higher than individual owners. A post hoc test using Dunn's was used for sectors and years in operation. According to the sector, beverage-serving activities were significantly lower than all sectors. When grouped according to years in operation, respondents with more than 5 years rated significantly lower than respondents with 1-2 years.

In terms of the level of vulnerability of non-individual owners, the results imply that they are more vulnerable under various shock conditions. There is considerable diversity in how they experience the impact of COVID-19 in terms of turnover, management structure, and socioeconomic parameters.

This is supported by the study of Susanty et al. (2022), where they segmented the businesses in their study based on four clusters: resilient cluster, low vulnerability cluster, moderate vulnerability cluster, and high vulnerability cluster. Most of the businesses in the survey fell into the clusters of moderate and high susceptibility. The ownership processes for conducting self-checks to identify risks that could contribute to the COVID-19 disease's spread, the number of suppliers or raw materials, and the degree to which the disruption of vital public utilities would affect the businesses were the differences between the low and moderate clusters, respectively.

Additionally, beverage-serving activities rated significantly lower levels of vulnerability than all sectors. The food and beverage sector is one of the biggest industries that fulfill fundamental necessities for human growth. Given that humans need food to survive, normal activities should be maintained in pandemic-like scenarios to provide for the needs of the populace (Memon et al., 2021). The findings imply that disruptions caused by COVID-19 do not affect all firms equally. Some were ordered to close, while others were deemed necessary and stayed open. Nevertheless, in the beverage-serving activities, considering it is a primary constituent of the food service industry, it can be implied that they have strategically responded to their businesses, which is also attributable to consumer consumption changes.

This is supported by the study of Gerritsen et al. (2021) that the COVID-19 epidemic made many people feel alone or anxious, which made them more prone to "comfort eating" or binge eating and encouraged them to buy and consume more unhealthy food and beverages. In addition, some social media posts had a child audience in mind. Advertising for unhealthy foods and drinks is widespread and prolific across many media, including online. According to reports, food and beverage firms utilize social media to advertise their goods since these platforms enable consumers to interact with brands in a way that promotes brand loyalty, purchases, and reach.

Consumers, retailers, restaurateurs, bar owners, and brands all attempt to support at-home consumption experiences, a multi-stakeholder movement. Larger-scale purchases appear to reflect consumer convenience and stockpiling during the early stages of the pandemic (e.g., avoiding queues). Memon et al. (2021) also mentioned in their study that beverages with mixed tastes have been quickly expanding their market share. Because of changing consumer preferences and producers' willingness to quickly adopt new technology to fulfill these needs, the beverage sector has undergone significant change. Because of this, producers may now push consumers to look for multifunctional products and pay more for them.

Also, when grouped according to years in operation, respondents with businesses of more than 5 years rated significantly lower vulnerability than respondents with 1-2 years. The findings imply that younger firms (those in operation less than 2 years) are more likely to be vulnerable to the COVID-19 pandemic, as they may not be reasonably well-anchored for such longer-run expectations in a crisis. They could not broaden their product sources and distribution because they lacked knowledge and experience. Due to resource constraints and a lack of crisis planning awareness, the firms may have difficulty implementing their crisis management plan and strategy because of their limited scope.

This is supported by the study of Misky et al. (2021) that most startups are vulnerable at early stages. In theory, this is how most researchers describe the lifecycle of a company; however, some claim that the "valley of death" is a little longer. Also, Prashar et al. (2020) also made their early assessment that a third of the 70% rise in the number of business dissolutions in March 2020 compared to March 2019 is attributable to young firms (between one and five years old).

6. Difference in the Level of Resilience

Table 6 presents the significant difference in the level of business resilience of BMBEs when grouped according to sectors, years in operation, ownership type, and the current number of employees. Mann Whitney U test was used to determine the significant difference in the level of business resilience of BMBEs when grouped according to ownership type and the number of employees, and Kruskal Wallis when grouped according to sector and years in operation.

Table 6. Difference in the Level of Business Resilience of BMBEs

Variable	U	z	p
Ownership Type	3034.000	-1.569	0.117
No. of Employees	1058.000	-1.357	0.175
Variable	χ^2	df	p
Sector	50.428*	8	0.000
Years in Operation	3.815	2	0.148

Note: *difference is significant when $p \leq 0.05$

There was no significant difference in the level of resilience of BMBEs when grouped according to ownership type [$U=3034.0$, $p=0.117$], the number of employees [$U=1058.0$, $p=0.175$], and years in operation [$\chi^2(2) = 3.815$, $p=0.145$].

The results imply that MSMEs' pandemic resilience can be observed when demand is suppressed, products cannot be delivered, the asset value of the business is decreased, revenues are down, and the number of staff is decreased. However, most MSMEs are unwilling to shut down during the pandemic despite issues, difficulties, and other features that require adaptation. They have adopted various strategies to retain sales, including adjusting their products, production processes, raw material composition, lowering staff compensation, and online sales of their goods (Kusumasari & Retnandari, 2021).

It is frequently suggested that the length of business operation corresponds to the period the employer has spent managing its enterprise. A company could be more stable the longer it had been in operation. However, for a few reasons, the duration of a business's existence has little impact on its revenue during a pandemic. This is because business actors can turn failure into a useful experience during the business so that they can construct a new business order for longer business continuity or stability from these issues. During this pandemic, people with a certain disease need more inventive businesses (Suminah et al., 2022).

The findings of the study are supported by Licayan et al. (2020), Predictors of Business Resilience among Micro, Small and Medium Enterprises in Monkayo, Davao de Oro, Philippines, in the Context of the COVID 19 Pandemic, in their study it was also revealed that there is no significant difference on the level of business resiliency among MSME when respondents are grouped according to years in business and establishment type. Using hierarchical regression analysis, years in business do not significantly moderate the relationship between the significant factors and the business resiliency among MSMEs but provide a significant moderating effect regarding establishment type. This is also similar to the study findings of Kusumasari and Retnandari (2021), as their findings of the t-test showed no statistically significant difference in the income of MSMEs with more than 15 years of operation compared to those with fewer than 15 years.

However, there was a significant difference in the level of resilience of BMBEs when grouped according to sector [$\chi^2(8) = 50.428$, $p=0.000$]; the Post hoc test using Dunn's test was used for the sector. According to the sector, agricultural raw materials and live animals, and other specialized and non-specialized wholesale and retail are rated significantly higher than all.

The results rationalize that food is a necessity, so the crisis should have less of an impact on the demand for food than it will on the demand for other goods and services. The health issue now has no reason to become a worldwide food catastrophe. Supplies of staple crops are large; output prospects are excellent. Moreover, most countries have recognized the agriculture and agro-food sector as crucial and free from business closure and limitations on travel. For many countries, the direct impacts of the pandemic on primary agricultural activities should be limited, given that the disease does not disrupt the natural resources upon which production is dependent (OECD, 2022b).

Furthermore, supply chains significantly affected Covid-19 for both wholesalers and retailers. Despite this, numerous retailers were able to thrive, and during the decade that followed, shifting consumer preferences have compelled firms to migrate online. Retailers have become more reliant on

social media and e-commerce, although there has already been a seismic transition to the online world. Since the virus's emergence, wholesalers have responded by eliminating the intermediary and selling directly to customers.

According to The Organization for Economic Cooperation and Development (OECD, 2020b), while the pandemic presents some major issues for the food system in the short term, it also has the potential to expedite transformations in the food and agriculture sector to increase its resiliency amid a variety of concerns, including climate change. According to Haque et al. (2022), another metric to assess the effects of COVID-19 is the resilience of the agricultural sector to the pandemic. Small farms, which mostly rely on family work, are more robust than large farms, which rely heavily on external labor. Marchant-Forde and Boyle (2020) also contended that when difficulties arise, there are many opportunities for bottlenecks in the lengthy chain between farm and retail due to vertical integration and reliance on large, centralized meat processing plants. Haque et al. (2022) further argued that at the same time, they argued that a crisis like this might be an "opportunity" for evaluating agricultural production systems and implementing more innovative tactics, sustainable practices, and digital agriculture solutions.

For the wholesale and retail industry, according to The Organization for Economic Cooperation and Development (OECD, 2020c) report, the retail sector will benefit from efforts to increase its resilience to shocks. Brick-and-mortar stores can grow their online sales activity to diversify their sales channels. Governments should focus on regulatory obstacles that prevent traditional merchants from participating in online sales (such as permitting and zoning restrictions) and framework circumstances that influence demand for online sales in addition to providing financial support (e.g., digital literacy, consumer protection, security, and reliability of payment systems). The retail industry should also consider the resilience of its supply chain where necessary, particularly by relying on more diversified sources of goods, improving inventory management, and utilizing data analytics to improve forecasts on sales and supply chain tensions. It is because COVID-19 affects the food and agricultural supply in complex ways.

The study's findings have verified an overall data analysis in the context of the theoretical framework. Only a minimal extent of BMBEs' People, Processes, Profits, and Partnerships vulnerabilities exist. In contrast, the findings demonstrated that BMBEs had a high level of commercial toughness during the COVID-19 crisis. The businesses were resilient and able to absorb both internal and external shocks, and they dealt with these events by adjusting to change and seizing opportunities. In this way, a company can maintain operations during a crisis while remaining viable.

D. Findings

In terms of the level of vulnerability of BMBEs in terms of People, Processes, Profits, and Partnerships, when taken as a whole, results showed that the businesses had a moderate level of vulnerability during the COVID-19 crisis. Specifically, their Profits had a high level of vulnerability during the COVID-19 crisis. At the same time, People obtained the lowest mean implying that the level of vulnerability of the business to the COVID-19 crisis in this aspect is moderate.

Moreover, in terms of demographics and when grouped according to Ownership Type, non-individual ownership has a high level of vulnerability compared to the moderate level of individual ownership. When grouped according to Years in Operation, those businesses operating within 1-2 years obtained the uppermost level of vulnerability, which implies a moderate level of vulnerability. The Profit aspects of businesses operating within 1-2 years, among other dimensions, were the most vulnerable, indicating a high level of vulnerability. When grouped according to the Number of Employees, those businesses with less than 10 employees obtained the uppermost level of vulnerability, which implies a moderate level of vulnerability compared to more than 10 employees.

In terms of the level of business resilience of BMBEs in terms of Proactive Capabilities, Responsive and Adaptative Capabilities, and Reactive Capabilities, when taken as a whole, there is a high level of business resilience of BMBEs during the COVID-19 crisis. In terms of areas, all were deemed high resilience. Specifically, Reactive Capabilities obtained the highest mean, followed by

Responsive and Adaptive Capabilities and Proactive Capabilities. In terms of demographics of the BMBEs, non-individual ownership has a high level of business resilience compared to individual ownership.

Moreover, those businesses operating within 1-2 years obtained a high level of business resilience compared to businesses with more than 5 years in operation. When grouped according to the Number of Employees, those businesses with less than 10 employees obtained a high level of business resilience. In addition, when grouped according to Sector, in the Wholesale and Retail Trade Sector, Other Specialized and Non-specialized Wholesale and Retail obtained the highest mean, implying a high level of business resilience during the business the COVID-19 crisis. While Food, Beverages, and Tobacco obtained the lowest mean, which still implies a high level of business resilience during COVID-19.

In terms of Mechanisms (Coping Strategies), most BMBEs adopt technology for business communication for promotion purposes or digital marketing, followed by continuous improvement of existing products/services. However, only a few had sold off assets early due to uncertainties in the market during the current situation. Whereas, in terms of Challenges, the majority of the BMBEs have experienced the insufficient ability to obtain sufficient cash flow to maintain operations, followed by customers who have been affected, demand being below normal, and the inability to obtain sufficient equipment and materials.

Furthermore, there is no significant difference in the level of vulnerability of BMBEs when grouped according to the number of employees. However, there were significant differences in the level of vulnerability of BMBEs when grouped according to sectors, years in operation, and ownership type. However, there was a significant difference in the level of resilience of BMBEs when grouped according to sector. According to the sector, agricultural raw materials and live animals, and other specialized and non-specialized wholesale and retail are rated significantly higher than all.

E. Conclusion

It is inferred that the businesses were highly resilient during the COVID-19 crisis, as there is only a moderate extent of vulnerabilities from the BMBEs' internal operations in the areas of People, Processes, and Profits. The businesses were resilient and able to absorb both internal and external shocks, and they dealt with these events by adjusting to change and seizing opportunities.

Specifically, the businesses' Reactive Capabilities obtained the highest mean, which implies the business owners' and managers' reactive behavior to find an immediate solution in responding to a crisis and issues as they arise. It is construed that businesses have the capacity for adaptability in dealing with complex but realistic challenges and their capacity to build new internal capacities for resilience regardless of what plausible scenario materializes. They were able to come up with mechanisms (coping strategies) such as the adoption of technology for business communication for promotion purposes or digital marketing, followed by continuous improvement of existing products/services. They have revamped their business operations to be resilient. It is implied that flexibility, collaboration, risk management culture, and digitalization were recognized as critical elements for their business continuity amid crisis.

However, there is a significant variation when BMBEs are classified by the number of employees and by sector. The results imply that their recovery plans must be specific to the various phases of the businesses' development, context, and sectors. The findings suggest that selecting the best strategy for the company and the circumstances is the most important step for village micro business enterprises. This suggests that these companies must constantly evaluate their operating environment to stay competitive.

This is also to construe that the effect of government support may vary as an influence by business characteristics and should vary based on the type of the business and maturity of the company. The study's findings are predicated on the idea that generalizations about developing resilience in various contexts cannot be made based on knowledge of how BMBEs respond to challenges in different business situations. This is due to the need for special consideration of

contextual differences that drive the resilience growth of businesses in various contexts - based on their nature or characteristics.

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