The Impact of Entrepreneurial Characteristics on the Business Resiliency of Micro, Small and Medium Enterprises in the Philippines

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Abstract : The purpose of this study is to determine which entrepreneurial characteristics have a more significant influence on the business resilience of micro, small and medium enterprises in the Philippines and the extent to which they do so. Entrepreneurial characteristics used are risk propensity, need for achievement, and locus of control, optimism, competitiveness, and innovativeness, while entrepreneurial resilience was measured using the Connor–Davidson Resilience Scale 10. Convenience and snowball sampling technique was chosen with 160 business owners operating for more than five years and considered surviving participated and completed the survey. The data wereanalyzed using descriptive statistics, factor analysis, and correlation. Cronbach's alpha was utilized to measure internal consistency and reliability. The results revealed that entrepreneurial characteristics, specifically innovation, optimism, and competitiveness, exhibit a strong positive influence on entrepreneurial resilience. Ways to strengthen the ability to withstand disasters and market challenges through developing programs and policies supporting small business owners aligned to nurture entrepreneurial characteristics are suggested to ensure the sustained survival of small business owners.

Keywords: entrepreneurship, entrepreneurial characteristics, resilience

1. Introduction

When it comes to natural disasters, the Philippines is ranked third among 171 countries worldwide, according to the World Risk Report. These disasters can interrupt a company's supply chain, damage equipment, and have an impact on its employees and customers. The effect of disasters depends on the size of the business and its preparedness level, according to the posted article of Jimenez (2019) in Manila Standard. Micro, small, and medium enterprises (MSMEs) are more vulnerable to natural and human-induced hazards than larger firms, given the limited range of risk-management mechanisms they can access. These enterprises do not often have a business continuity plan in preparation as they rely heavily on their character and determination in the face of uncertainty. These small businesses have been particularly vulnerable to the crisis's effects because they have fewer resources to weather the storm. Entrepreneurs make decisions about strategies to survive that determine whether they are resilient to market challenges.

This is utterly relevant and worrisome considering that MSMEs are widely acknowledged as a key driver of the Philippines' economic development and serve as the country's socio-economic backbone. According to the Philippine Statistics Authority, MSMEs represent around 99% of registered businesses and provide more than 60% of the country's total employment. These firms also account for a large portion of the country's Gross Domestic Product (GDP), accounting for 36% (ASEAN SME Policy Index), making vital contributions to the national economy. Given the COVID-19 crisis, addressing the challenges that small businesses face daily is more than necessary. Business owners will become more resilient to shocks, embrace digital opportunities, and foster inclusive and sustainable growth with the aid of a supportive business environment. Can these company's vulnerability to the shock and its coping mechanisms combine with their determination to produce outcomes: will the company be engulfed by the crisis and go bankrupt? Or will it be able to live in a weaker or stronger state?

The impact of disasters on small firms and the consequences this challenge has on the economic and business recovery of the MSMEs is one of the least explored areas in disaster risk management. This gap hinders the insight of the way business resilience can be achieved from the entrepreneurial decision perspective. While there is a growing interest in business resilience research in the business and management literature, it focuses primarily on one side, firm-oriented approaches, and at the firm level (Conz et al., 2020). Accordingly, resilience at an

individual level has received less attention (Hofler, 2014), especially from the entrepreneur perspective. This study will examine business resilience through an individual-oriented approach, determining the effects of entrepreneurial characteristics on the level of resilience decisions. In view of the vital role of MSMEs in the economy, threatened by different market conditions, especially with the current pandemic situation, this study will aim at examining the entrepreneurial characteristics as a key determinant of MSMEs' business resilience. The study will first attempt to determine the level of entrepreneurial characteristics of MSMEs and then examine its association as to how these businesses can affect resilience despite challenges face through the said entrepreneurial features. Furthermore, if these MSMEs are to be made resilient to the next crisis or disaster, the entrepreneurial characteristics need to be better understood and improved.

2. Literature Review

2.1 Entrepreneurial Characteristics

Studies in different nations have argued that the characteristics of entrepreneurs are relevant factors in determining the traits of small business owners and, ultimately, the ability of the company to achieve a significant level of business performance that leads to the success and survival of the enterprise. The success of small businesses and their performance hinges on the character display by the entrepreneurs in a competitive environment (Idowua et al., 2017). Among many other studies about the characteristics of entrepreneurs, this study will use risk propensity, need for achievement, locus of control, optimism, competitiveness, and innovativeness as the main attributes for entrepreneurial characteristics because these attributes are the most cited studies in entrepreneurial behavior of an individual (Uru et al., 2011).

2.1.1 Risk Propensity

Studies show that persons whose risk attitudes fall in the medium range level survive longer in the business challenges faced by entrepreneurs than do with particularly low-risk attitudes (Caliendo et al., 2008). In the study of Antoncic et al. (2017), risk propensity or the tendency of entrepreneurs to avoid taking risks in business operations is considered to be significantly related to an entrepreneur's start-up intentions and exhibited behaviors. Non-resilient persons are easily discouraged when face with challenges and challenging environments; accordingly, entrepreneurs with resilient capabilities can act in times of adversity and have a more significant risk propensity to act (Gorgievski& Stephan, 2016). Also, according to Herdjiono et al. (2017), the risk-taking propensity of entrepreneurs had been found significant on entrepreneurship intention as the more risks they are sensing as something that can affect their business and its operations, the more likely they are to avoid engaging in that business. Therefore, to study the relationship between risk propensity and entrepreneurial resiliency of MSMEs, the following hypothesis is developed:

H1. Risk propensity has a positive and significant effect on the entrepreneurial resilience of micro, small and medium enterprises in the Philippines.

2.1.2 Need for Achievement

In an empirical study conducted by Amin et al. (2018), an entrepreneur's need for achievement relates to their intention of making this as their form of motivation and support in continuing with their business and predicting entrepreneurial persistence in their respective markets and industries. Moreover, it was indicated that some businessmen tend to increasingly rely on the support and aid from the government and other agencies merely for supporting their sales and services and now, encompassing different aspects such as their operational and advisory aspects in business management. Further, as observed in the study by Davidkov & Yordanova (2016), it was hypothesized that achievement motivation tends to have the capacity to energize economic growth and development, especially in various cultural dispensations and societies through the establishment of business and establishments. In addition, achievement-motivated characteristics that are usually and needed to be possessed and exhibited by entrepreneurs have a significant relationship with how they can become a valuable contributing factor for economic growth and development. It was emphasized that motivation is also widely known to be a significant driver or stimulator to achieve or attain entrepreneurial start-up and success both for novice and already established businesses. Therefore, the author hypothesized as follows:

H2. Need for achievement has a positive and significant effect on entrepreneurial resilience of micro, small and medium in the Philippines.

2.1.3 Locus of Control

Factors such as locus of control have significantly contributed to business resilience; Herbert et al. (2012) stated that high and medium resilient individuals have a significantly higher internal locus of control than low resilient groups. As defined by Kebaili et al. (2015), locus of control as a behavior predictor can be internal and external and, thus, can impact entrepreneurial team effectiveness and efficiency and how it is directly related to an internal locus of control in businesses. Pandey & Tewary (2011) indicate that achievement values and internal locus of control are necessary to be possessed by entrepreneurs in their business operations. In addition, they strengthened the notion that businesspersons needed to develop internal control further and how it pertains to having a generalized expectation that outcomes are contingent upon one's behavior, which is also needed to improve to have a more remarkable ability to overcome respective environments. Locus of control pertains to how a person believes that they have control or power over the events and challenges that occur in their respective lives and different endeavors (Dawwas & Al-Haddad, 2018) thus, as it relates to determining the relationship of entrepreneurs having control over the challenges face that occurs in managing such businesses, this study hypothesis the following:

H3. Locus of control has a positive and significant effect on entrepreneurial resilience of micro, small and medium in the Philippines.

2.1.4 Optimism

Running an MSMEs involves substantial doses of optimism (Chatterjee & Wehrhahn, 2017). These businesses are constantly facing varying challenges affecting operations to a certain extent and, even at times, can also lead to bankruptcy which is being avoided by many businesses. Thus, it was noted by Hmieleski& Baron (2009) that entrepreneurs need to have optimism for them to expand and grow without the greater fear of failing that hinders them in achieving their goals. On the other hand, high levels of optimism, according to Adomako et al. (2016), among entrepreneurs can be an advantage in terms of making them motivated and in providing a source of determination to keep going, which tend to exhibit confidence in a way that encourages them to approach challenges more effectively with enthusiasm and persistence. One of the qualities associated with resilience is optimism (Schutte &Mberi, 2020), and it is evident that resilient entrepreneurs highly accept uncertain situations, adapt to changing circumstances, and embrace change. They are optimistic and always positively face adverse situations (Manzano & Ayala, 2013). Thus, this notion allows this study to frame the fourth hypothesis as follows:

H4. Optimism has a positive and significant effect on entrepreneurial resilience of micro, small and medium in the Philippines.

2.1.5 Competitiveness

Another essential aspect necessary to be innate to entrepreneurs is their ability to do the business competitively compared to their competitors. In fact, according to the study of Zaridis (2016), it was highlighted the entrepreneur's characteristics that are valuable sources of their competitive advantage and thus what makes them stand out among their other firms. It was also added in this study that the sources of businesses' competitive advantage are connected to the maintenance of a diachronically long-term competitive advantage approach. Increasing the competitiveness of entrepreneurs operating small companies can spur resilience to challenges and future shocks while promoting inclusive and sustainable growth (International Trade Center, 2020). In addition, the analysis from the surveys conducted reveals that company competitiveness is closely linked to its experience of crises. Thus, the fifth hypothesis was proposed:

H5. Competitiveness has a positive and significant effect on the entrepreneurial resilience of micro, small and medium enterprises in the Philippines.

2.1.6 Innovativeness

An article by Wu (2020) indicated that an innovative entrepreneur or organization could have a more resilient business type. Carvalho et al. (2016) indicated that innovativeness makes a business more flexible and adaptable to different changes and challenges that can cause some negative implications to their business operations. In addition, innovativeness is also closely associated with creativity, allowing businesses to become more resilient and sustainable despite challenging times and circumstances. According to the 2020 report published by the International Trade Centre, the ability of a company to change based on skills and innovation demonstrates its ability to adapt to market trends which are critical for building resilience in the face of crises. Drawing upon these reports and works of literature, the author postulate that:

H6. Innovativeness has a positive and significant effect on entrepreneurial resilience of micro, small and medium in the Philippines.

2.2 Entrepreneurial Resilience

Entrepreneurial resilience is a dynamic adaptation process that allows entrepreneurs to remain forward-thinking despite challenging market conditions and destabilizing events that they face in the marketplace (Bernard & Barbosa, 2016). The capacity for resilience, according to Santoro et al. (2020), enables the enterprise to take appropriate actions and adapt in response to unanticipated events that potentially threaten its continued growth and success. According to Sabatino (2016), resilient entrepreneurs are more capable of developing proper strategies as an answer to the environmental challenges and, consequently, to get positive and sound performances in the long-time success and survival of the business. Understanding the role of the entrepreneur gives a better insight into what competencies are needed to ensure the business's survival and business success (Sarwoko & Hadiwidjojo, 2013). Personality traits, vision, and belief systems are some factors identified by Schutte &Mberi (2020), which act as influencers of entrepreneurial resilience and are primarily seen as being antecedent to the creation of entrepreneurial resilience, which was in turn viewed as a prerequisite to the creation of sustainable business ventures. For the summary, Figure 1 then shows the research model comprising all six presented hypotheses together.

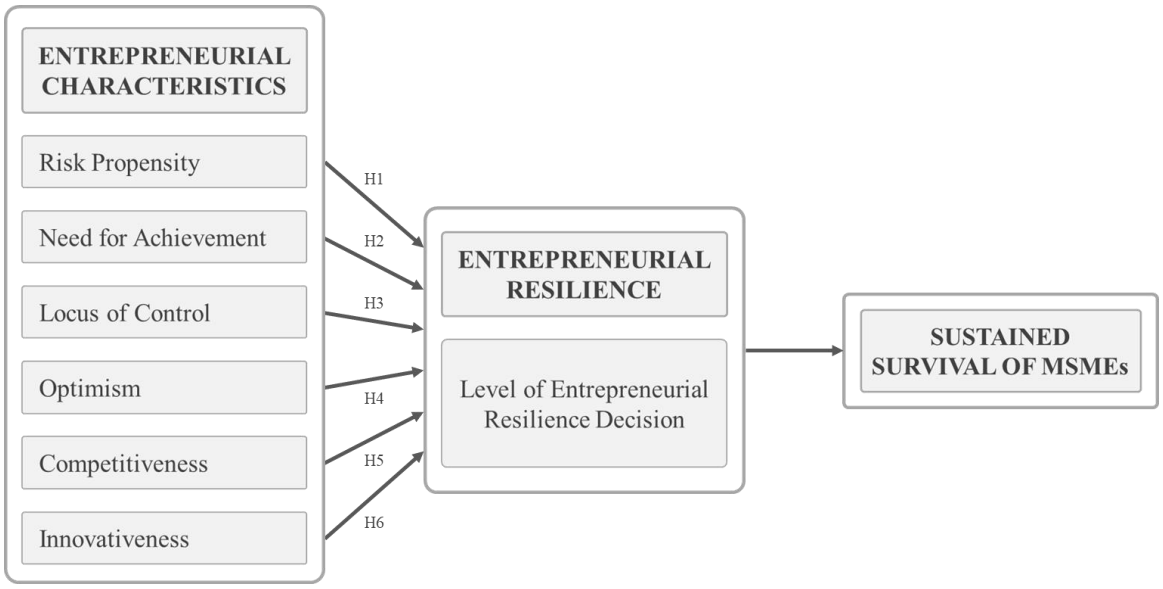

Figure 1. Research model

3. Methodology

3.1 Research Design and Data Collection

The study utilized a quantitative research approach with a descriptive method. The researcher collected the data from business owners in Metro Manila and CALABARZON because these two regions hold the highest share of MSMEs in the Philippines at 20 percent and 14 percent, respectively. The survey was administered using an online platform and posted in different web groups for one month, from April 16 to May 16, 2021. This is due to the current travel restrictions and various safety protocols to conduct face-to-face data collection in preventing the spread of the COVID-19 virus. More so, this cross-sectional study, usually, may often stay online for a longer period in order to collect data. The questionnaire was designed to capture entrepreneurial characteristics and resilience based on earlier studies and literature. A self-administered questionnaire was developed consisted of three sections that covered (1) demographic profile of the entrepreneur, (2) entrepreneurial characteristics, and (3) entrepreneurial resilience. Adopting the scales on the constructs from previous literature relevant to entrepreneurial characteristics, a self-structured questionnaire was assessed with multiple items using a four-point Likert's scale ranged from (4) strongly agree to (1) strongly disagree. Questionnaires were drawn from Chye Koh, H. (1996) to measure risk propensity and competitiveness. In contrast, the need for achievement and innovation was constructed from Neneh, B.N. (2011). In addition, locus of control was drawn from Levenson, H. (1974), and optimism was taken from Kirton, M.J. (1981).

A pilot study was conducted to ensure reliable and valid content. All the respondents in this study were engaged in business, adopting the definition under the Philippine Magna Carta for MSMEs as its main qualification, that 1) the asset size should not exceed Php 100 million and 2) the total number of employees should be 0-199. Moreover, the business should be formally registered and have been operating for more than five years to be considered in the survival stage as the entrepreneur has had enough experience to overcome high-impact business challenges in the face of adverse situations. In total, 400 business owners were contacted and showed responses to the link posted in web groups, of whom 160 responded to all questions and gave permission to participate in this study. The researcher took preventive measures in the survey platform to prevent participants from answering the questionnaire twice. Respondents were informed about the study's intent, participation was voluntary, and confidentiality and anonymity were guaranteed for ethical reasons and consideration.

3.2 Entrepreneurial Resilience

This study will measure entrepreneurial resilience using the Connor–Davidson Resilience Scale 10 (CD-RISC 10) based on the original version of the 25 items CD-RISC because it has excellent psychometric properties and is shown to be appropriate for use within a different culture (Connor & Davidson, 2003; Notario-Pacheco et al. 2011; Wang et al. 2010). The 10-item scale was developed by Dr. Campbell-Sills and Dr. Stein at the University of California based on factor analysis and was thought to be a better reflection of the ability to recover from the variety of challenges that can arise in life (Riopel, 2020). The respondents rate the items on a five-point Likert scale ranging from (0) not true at all to (4) true nearly all the time. Total scores are calculated by summing the ten items, with higher scores corresponding to higher levels of resilience.

3.3 Statistical Analysis

The author used Statistical Package for Social Sciences (SPSS)26 for descriptive statistics and SPSS AMOS 26 for confirmatory factor analysis. To determine internal consistencies of the scales the Cronbach's Alpha was used for reliability analyses. Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) was performed to determine whether the adapted forms of scales had valid factor structures and fit the constructs conceptualized in the study and as described in the literature. Factors were rotated using Varimax Rotation.

4. Results and Discussion

4.1 Sample Characteristics

A total of 400 questionnaires were distributed to MSMEs business owners, and 160 firms completed the online survey with a response rate of 40%.As depicted in Table 1, the results show that majority of business owners that participated in the survey are male in their early 40s and educated or have a college degree. In addition, most of the participants started their business from scratch and have been operating in the 5-10 years bracket.

4.2 Exploratory Factor Analysis and Cronbach's Alpha Reliabilities

Exploratory factor analysis was used to determine if various literature indicators adopted were loading under their respective factors. These six entrepreneurial characteristics (factors) derived from factor analysis using principal component analysis showed that all the 24 variables are highly significant and important. The variables that have factor loadings of 0.50 or higher are interpreted as practically significant. The varimax method of rotation was employed for easier interpretation.

The factors derived from exploratory factor analysis accounted for 73% of the total cumulative variance higher than 0.60. The instrument's internal consistency (Table 2) indicates that its reliability is acceptable (Cronbach, 1951), with a Cronbach's alpha value of more than 0.70.In addition, this study tries to highlight which entrepreneurial characteristics are demonstrated the most by small business owners. The mean score reveals that innovation and competitiveness with a total average weighted mean of 3.53 and 3.40 are extensively practiced.

Table 1. Demographic Profile of the Respondents

Entrepreneur Information	**f**	**%**
Average age of the entrepreneur	42yrs. old	—
Share of male-owned firms	103	64.37%
Share of firms with an owner who finished at least college	129	80.62%
Path to Ownership		
From Scratch	124	77.50%
Inheritance	33	20.63%
Acquisition	3	1.88%
Sector Composition		
Agriculture	2	1.25%
Manufacturing	21	13.13%
Other Industries	7	4.38%
Hotel and Restaurant	12	7.50%
Other Services	23	14.38%
Wholesale and Retail Trade	95	59.38%
Years of Operation		
5 – 10	78	48.75%
11 – 15	41	25.63%
16 – 20	24	15.00%
More than 20 years	17	10.63%

Note: Frequency (N = 160)

4.3 Confirmatory Factor Analysis

The exploratory factor analysis revealed that the initial design of the 10-item CD-RISC was compatible with a single-factor model. The scale also had a strong level of internal consistency (α =.81) based on Cronbach's reliability analysis. Cronbach's alpha of 0.80 agrees with earlier studies that employed the ten-item scale to assess resilience (Fatoki, 2018). The resilience scale score shows an average of 30.41 (Table 3) out of the maximum total of 40, which indicates the level of business owners' resilience. Confirmatory factor analysis was then used to assess the validity of a single component model that underpins the 10-item CD-RISC. The result showed that the KMO's (Kaiser-Meyer-Olkin) measure of sampling adequacy is 0.753, which exceeds Hair's et al. (1998)

suggested threshold of 0.60, indicating there are sufficient items for each factor, whereas the Bartletts' test of sphericity has a chi-square value of 862.37 and is significant (*P*-value .000). This indicates that the correlation matrix is significantly different from the identity matrix which correlation variables are all zero. The total variance explained was 73%.

The results of CFA indicated that the model was found to be significant based on the evaluation of goodness of fit with valuesχ^2 = 94.4; p = 0.000; df = 33; CMIN/df = 2.86; RMSEA = 0.061, GFI = 0.901, CFI = 0.91and SRMR = 0.039. According to these values, it can be said that the structure model of CD-RISC10, which consists of one factor, was well fit, and it can be inferred that the model meets the conformance model. The factor loadings on all the criteria used to assess entrepreneurial resilience presented in Table 3 range from 0.78 to 0.51.

Table 2. Exploratory Factor Analysis and Cronbach's Alpha Reliabilities

Variables	Indicators	Loadings	Mean	Alpha
Risk Propensity	RP1	0.795	3.27	0.88
Source: Chye Koh, H. (1996)	RP2	0.751	3.28	
	RP3	0.765	3.23	
	RP4	0.664	3.34	
Need for Achievement	NA1	0.829	3.08	0.90
Source: Neneh, B.N. (2011)	NA2	0.773	3.05	
	NA3	0.842	3.11	
	NA4	0.643	3.16	
Locus of Control	LC1	0.666	2.99	0.80
Source: Levenson, H. (1974)	LC2	0.691	3.00	
	LC3	0.616	2.91	
	LC4	0.656	3.09	
Optimism	OP1	0.813	3.32	0.93
Source: Kirton, M.J. (1981)	OP2	0.809	3.29	
	OP3	0.811	3.31	
	OP4	0.702	3.30	
Competitiveness	CP1	0.811	3.41	0.92
Source: Chye Koh, H. (1996)	CP2	0.787	3.38	
	CP3	0.781	3.42	
	CP4	0.703	3.38	
Innovativeness	IN1	0.757	3.53	0.85
Source: Neneh, B.N. (2011)	IN2	0.732	3.53	
	IN3	0.764	3.50	
	IN4	0.531	3.55	

Mean Scale Interpretation:1.00 – 1.75 Rarely Practiced, 1.76 – 2.50 Moderately Practiced, 2.51 – 3.25 Practiced,3.26 – 4.00 Extensively Practiced

Table 3. Factor Loading and Descriptive Statistics of Entrepreneurial Resilience (CD-RISC 10)

Entrepreneurial Resilience	Mean	SD	Factor Loading
Able to adapt to change	2.32	0.638	0.56
Can deal with whatever comes	3.10	0.720	0.65
Tries to see the humorous side of problems	3.29	0.706	0.63
Coping with stress can strengthen me	3.09	0.686	0.51
Tend to bounce back after illness or hardship	3.14	0.759	0.78
Can achieve goals despite obstacles	3.06	0.661	0.76
Can stay focused under pressure	3.13	0.778	0.77
Not easily discouraged by failure	2.90	0.870	0.67
Thinks of self as a strong person	3.26	0.738	0.78
Can handle unpleasant feelings	3.11	0.700	0.75

Cronbach's Alpha ($\alpha = 0.810$)
Resilience Scale Score = 30.41/40.00

4.4 Relationship between Entrepreneurial Characteristics and Entrepreneurial Resilience

This study examined the relationship between entrepreneurial characteristics and resilience using Pearson correlation to test the research hypotheses. Table 4 depicts the correlation between entrepreneurial characteristics and their level of resilience. All the characteristics used have high correlations with entrepreneurial resilience. Risk propensity, need for achievement, and competitiveness is all significant at 0.05 levels. The findings are consistent with those reported by Hyo & Hye (2015) that persons higher in resilience respond more positively to risky or stressful situations, which leads to creating greater propensity. On the other hand, locus of control, optimism, and innovation has high and positive correlations with resilience at 0.01 significant levels. These results are consistent with previous findings that revealed the associations between resilience and particular characteristics such as innovations and optimism (Galli & Vealey, 2008; Hallak et al., 2018).

Table 4. Correlations between Factors

Variables	Indicators	Entrepreneurial Resilience	Interpretation
Risk Propensity	Pearson Correlation	0.195*	Significant
	Sig. (2 tailed)	0.014	Support H1
Need for Achievement	Pearson Correlation	0.178*	Significant
	Sig. (2 tailed)	0.024	Support H2
Locus of Control	Pearson Correlation	0.230**	Significant
	Sig. (2 tailed)	0.003	Support H3
Optimism	Pearson Correlation	0.211**	Significant
	Sig. (2 tailed)	0.007	Support H4
Competitiveness	Pearson Correlation	0.182*	Significant
	Sig. (2 tailed)	0.021	Support H5
Innovativeness	Pearson Correlation	0.215**	Significant
	Sig. (2 tailed)	0.006	Support H6

Note: *. Correlation is significant at 0.05, **. Correlation is significant at 0.01 level

5. Conclusion and Recommendations

MSMEs constitute a significant contribution to the Philippine economy. However, small businesses suffer more from growing due to different disasters and market challenges than large firms. The findings from the analysis showed that there is a strong positive association between entrepreneurial characteristics and their level of resilience in the context of small businesses. The outcomes of this study revealed the importance of fostering resilience education and enhancing entrepreneurial characteristics among entrepreneurs to increase the rate of survival of small business owners and encourage growth and development.

Not everyone can be promising entrepreneurs, but perhaps they can display facets of entrepreneurial characteristics that contribute significant value to their ability to withstand disasters if these characteristics can be formally assessed and developed. In other words, the challenging business environment has made educational institutions reconsider their role as promoters of entrepreneurial education and the government to emphasize greater attention to developing entrepreneurial characteristics and a greater degree of support for entrepreneurial programs(Agus etal., 2009).Ergo, this study formulated the following recommendations on improving the entrepreneurial resilience of MSMEs aligned with developing entrepreneurial characteristics in the Philippines. These recommendations are intended toward business owners and third-party entities participating in MSMEs development, such as government agencies, academic institutions, and businesses.

1. MSMEs owners should pursue programs and activities geared toward innovation because this will enhance their resiliency in facing market challenges and bounce back from any disasters. This includes fostering country-wide trade and innovation engagement.
2. MSMEs resilience can also be aided by effective implementation of government policies to improve business continuity assistance programs and support risk-mitigation technologies.
3. MSMEs resilience may be aided by promoting a growth mindset through exposure to training and programs for owners, managers, and employees. This includes visioning exercises to encourage more opportunity-seeking intentions that influence firms to have a forward-looking mindset to grow.

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