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Effect of Economic Vulnerability on Competitive Advantages, Enterprise Performance and Sustainability

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Abstract: This study investigated the effect of economic vulnerability upon competitive advantages, performance, and sustainability of micro-enterprises owned and managed by micro-entrepreneurs who participate in varied development initiatives in Peninsular Malaysia. Upon adopting the cross-sectional design, data were randomly collected from selected 300 micro-entrepreneurs from the eKasih program (national poverty data bank) located in four states of Peninsular Malaysia. The quantitative data were collected by conducting structured interview sessions with the respondents held from September until November 2017. The findings revealed that the state of economic vulnerability among the respondents had a significantly negative effect on the aspects of competitive advantages, performance, and sustainability among micro-enterprises in Peninsular Malaysia. Despite of the widely acknowledged and empirically examined effects of socioeconomic antecedents upon micro-enterprise performance, the focus on the effect of a more comprehensive measure of socioeconomic condition, that is, economic vulnerability, among low-income households appears to be scant. Hence, the outcomes of this study are able to provide critical insights for development organizations pertaining to development programs and their effectiveness on economically vulnerable, particularly among low-income households in Peninsular Malaysia.

Keywords: economic vulnerability; competitive advantages; performance; sustainability

1. Introduction

The dire issues of poverty, vulnerability, and inequality appear to be some topics constantly debated amongst developing nations. Without doubt, developing nations seem to experience a high level of material deprivation and large dispersion of individual well-being. Hence, poverty alleviation and inequalities reduction are at the top of the agenda for developing nations and the Millennium Development Goals (MDGs) of the United Nations. The concept of vulnerability (risk of experiencing poverty in future) has been discussed in-depth, followed by international economic shock, such as global economic crisis, which increases the emergence of poverty and hard core poverty (Heltberg et al. 2015). Despite the reduced incidence of poverty and hard core poverty (Al-Mamun and Mazumder 2015; Ahmed et al. 2016), inequality in income distribution and socioeconomic vulnerability among the poor still remain a threat among the low-income households in Malaysia, as well as in other developing nations (Nair and Sagaran 2015).

In Malaysia, poverty refers to those who live below the poverty line income (PLI), in which the Malaysian government defines poverty as lack of financial means to acquire the basic needs, including food and non-food components (Economic Planning Unit 2002). In 2014, the PLI for households in Peninsular Malaysia, Sabah and Labuan, and Sarawak had been RM930, RM1, 170, and RM990, respectively (RM—Ringgit Malaysia) (Economic Planning Unit 2014). Nevertheless, Malaysia had recorded a remarkable achievement in alleviating poverty because households that were categorized below PLI displayed a reduction from 50 percent to less than one percent in 2014. In precise, Malaysia had successfully achieved one of its MDGs in terms of eradicating extreme poverty and hunger. Nonetheless, poverty seems to remain as a major concern (Nair 2010), mainly due to stubborn pockets of poverty, issues linked to income distribution, as well as new forms of poverty that demand immediate intervention (Nair and Sagaran 2015).

Economic vulnerability denotes the risk of exposure to shocks and the potential to fall into poverty. Prior studies have conceptualized vulnerability into two genres, which are: assets poverty (Fisher and Weber 2004) and income poverty (McCulloch and Calandrino 2003). On the other hand, household income refers to the ability to pay for goods and services, apart from maintaining a certain standard of living, whereas assets reflect the accumulated wealth of a household that have a similar function as income. In fact, both are indicators of the economic ability of a household to meet present and future consumption needs. However, as the future is uncertain, households are exposed to shocks, such as health shocks (Jacobsen 2009), macroeconomic shocks (Inchauste et al. 2007), and multiple shocks (Yilma et al. 2014). The inability to sustain such shocks may push a household to succumb to poverty. Furthermore, as the concept of vulnerability incorporates both the poor and the non-poor, it has become a great interest among policy makers. In measuring economic vulnerability, two approaches happen to be common, which are: ex ante and ex post. The former approach is based on forecast, while the latter is based on actual facts of poverty and vulnerability. With that, Imai et al. (2011) proposed a combination of both ex ante and ex post approach to assess risk and resilience of households against shocks, with the possibility of designing effective measures against poverty. Moreover, the measurement of vulnerability takes into account several aspects of household characteristics, such as household head gender, marital status, education, age, race, employment status (Fisher and Weber 2004), average monthly household income, net worth of household assets, total number of sources of income, number of dependent household members, and the proportion of total income from economic activities (Al-Mamun and Mazumder 2015).

Apart from the individual and enterprise level of economic vulnerability and its effects, countries and macroeconomies are affected by economic vulnerability. At the macro level, elements that affect economic vulnerability and how it relates to other factors are completely different. Previous studies tackling the issues of economic vulnerability from various angles found that climate change (Esperón-Rodríguez et al. 2016) and unequal opportunity structures of education, health, ownership of productive assets and biased governance (Sobhan 2014) increases a countries economic vulnerability. On a positive note, investing in promoting social empowerment and creating opportunities through safe spaces, parenting and mentoring is found to reduce economic vulnerability among adolescent refugee girls in Ethiopia (Stark et al. 2018). On the other hand, economic vulnerability is found to increase the total public debts of a country, especially of those which are still developing (Kimm Gnangnon 2014); influence social cohesion (Vergolini 2011); leads to higher per capita capital stock and output with a lower level of consumption per capita (Cordina 2004). Interestingly, voters who are denied unemployment benefits, facing income volatility and uncertain formal employment hold their politicians responsible for their state of economic vulnerability (Singer 2016).

Previous studies pertaining to economic vulnerability mostly dealt with defining the concept, determining why individuals or households become vulnerable, and measuring the level of vulnerability among those classed within the category of hard core poor and low-income households. Nevertheless, a substantial number of low-income households, via microcredit programs, run micro-enterprises as the owners (Al-Mamun et al. 2010), thus exposing their businesses to economic vulnerability in

the events of shocks. In addition, according to the OECD (2000), small and micro-enterprises appear to be more prone to external shocks, in comparison to medium and large firms. The OECD, hence, suggests firms to upgrade their management skills, as well as their capacity to gather information and to use the technology.

Furthermore, prior studies have proven that entrepreneurship could indeed minimize inequality in income distribution (Halvarsson et al. 2018), aside from increasing household wealth and income (Gentry and Hubbard 2004). Hence, entrepreneurship has been regarded as a livelihood strategy as it complements salaried employment, raises income and labor utilization (Fields 2012), and appears to be the answer to overcome economic vulnerability (Verrest 2013). Additionally, Ma (2000) asserted that it is highly likely for an organization to offer added-value product and/or services for customers to attain better performance. Meanwhile, a recent empirical study carried out by Kuo et al. (2017) found that competitive advantage is positively linked to organizational performance.

As such, enterprises are faced with challenges to sustain within the present economic setting, which demand that entrepreneurs attain sustainability, as it is the only future success strategy (Danciu 2013). Nonetheless, empirical evidences that incorporate the elements of economic vulnerability, competitive advantages, firm performance, and sustainability at the level of micro-enterprise are still scant. Thus, in order to overcome this limitation and to shed light on the relationship and the effect of economic vulnerability upon competitive advantage, enterprise performance, and sustainability; this study had been carried out from the stance of low-income household setting.

2. Literature Review

2.1. Economic Vulnerability and Entrepreneurship

This study investigated the effect of economic vulnerability on competitive advantages, micro-enterprise performance, and micro-enterprise sustainability among micro-enterprises owned and managed by micro-entrepreneurs who participate in varied development initiatives in Peninsular Malaysia. In the attempt to explain the complex nature of enterprise performance, competitive advantage, and sustainability of micro-enterprises, this study leans on the fundamental concept of entrepreneurship. Entrepreneurship refers to the action of an individual and the process towards new business creation. However, this definition of entrepreneurship is being constantly updated by key authors in this field. Wennekers and Thurik (1999), for instance, define entrepreneurship as the capacity and the desire to create new business opportunities by introducing new organization forms, products, and methods. This definition integrates the uncertainty and obstacles in introducing new ideas, as well as the decision-making process. Nonetheless, this definition of entrepreneurship is further depicted by Ahmad and Hoffmann (2008) as a phenomenon linked with entrepreneurial activities towards value generation, by means of identifying and capitalizing on new products, process, and markets. From the definitions given by Wennekers and Thurik (1999) and Ahmad and Hoffmann (2008), simplified, entrepreneurship reflects the initiative taken by one whom we can identify as an entrepreneur to take up entrepreneurial activities involving creation of new business, decision-making, and facing uncertainties in the process of generating new products, processes, and markets.

Due to the interest in determining how micro-enterprises owned and managed by low-income households cope with economic vulnerability, it is essential to understand the role of entrepreneurship from the light of low-income households and micro-enterprises. It has been reckoned that small business ownership and self-employment are on the rise since past few decades in most economies (Halvarsson et al. 2018; Vial and Hanoteau 2015) with governments promoting business startups so as to achieve profitable economic growth (Ragoubi and El Harbi 2017). Although the reasons for new business creation are varied, inequality and poverty continue to remain as one of the main reasons why low-income households get involved in entrepreneurship, hoping for some increased income and wealth. Poor and low-income households have begun considering entrepreneurship as the only way to escape from the poverty trap and climb the social ladder. This view is vastly promoted as it has been assumed

that entrepreneurs are wealthy and have better consumption capability. Moreover, past studies have proven that entrepreneurship does reduce the inequality in income distribution (Halvarsson et al. 2018), and increases household wealth and income (Gentry and Hubbard 2004). Thus, entrepreneurship has been regarded as livelihood strategy as it complements salaried employment, raises income and labor utilization (Fields 2012), and addresses economic vulnerability (Verrest 2013).

2.2. Economic Vulnerability and Competitive Advantages

Competitive advantage denotes the ability of an organization to performance its activities in a way or differently that others cannot imitate (Kotler 2000). Meanwhile, Porter (1996) claims that competitive advantage refers to the ability of an organization to constantly earn above the average of the industry, whereas Barney (1991) defines competitive advantage as the implementation of a strategic value-creation that is not implemented by the present or potential competitors. As asserted by Porter (1996), competitive advantage can be attained via three effective strategies: focus, differentiation, and cost leadership.This means that when customers value a product or a service offered by an organization more than its contender, the organization has gained competitive advantage. Therefore, attainment of competitive advantage ascertains that an organization is being different and possesses the capability to earn more, in comparison to their competitors, hence translating to better economic performance. Furthermore, Ma (2000) explains that it is highly likely for an organization offering added-value product and/or services for customers to exert better performance. Meanwhile, a recent empirical study carried out by Kuo et al. (2017) revealed that competitive advantage is positively associated to organizational performance. On the other hand, economic vulnerability reflects the risk of exposure to shocks and the potential to be poor. In fact, past studies have conceptualized vulnerability into two divisions: assets poverty (Fisher and Weber 2004) and income poverty (McCulloch and Calandrino 2003). In explaining the correlation between economic vulnerability and competitive advantage, competitive advantage seems to have superior performance and better performance, hence signifying increased income and assets accumulation, while negatively affecting the economic vulnerability of micro-enterprises own and managed by low-income households. As such, the following hypothesis is presented:

Hypothesis 1. *Economic vulnerability has a significantly negative effect on competitive advantage among the micro-enterprises own and managed by low-income households in Peninsular Malaysia.*

2.3. Economic Vulnerability and Micro-Enterprise Performance

Poor and low-income households have begun considering entrepreneurship as a channel to move away from poverty. This view is established with the assumption that entrepreneurs are wealthy with enhanced consumption capability. Moreover, prior studies have proven that entrepreneurship can decrease inequality in income distribution (Halvarsson et al. 2018), but increase household wealth and income (Gentry and Hubbard 2004). As such, entrepreneurship is translated into a livelihood strategy, mainly because it complements salaried employment, raises income and labor utilization (Fields 2012), besides overcoming economic vulnerability (Verrest 2013). Hence, it is assumed that superior performance, which increases income and assets accumulation, may aid micro-enterprises owned and managed by those from low-income households in coping better with unexpected shocks, aside from minimizing economic vulnerability. Therefore, the following hypothesis is presented:

Hypothesis 2. *Economic vulnerability has a significantly negative effect on micro-enterprise performance among micro-enterprises who owned and managed by low-income households in Peninsular Malaysia.*

2.4. Economic Vulnerability and Micro-Enterprise Sustainability

The aspect of sustainability has sparked attention in recent years following the shifts in economic, environmental, and social dynamics of the contemporary modern world. Besides, these recent decades have witnessed numerous economic turbulences, devastating environmental catastrophes, and social

economic issues. Therefore, enterprises happen to face more challenging obstacles and barriers to sustain in this present economic condition, which demands entrepreneurs to weigh in the aspect of sustainability, for it is the only viable strategy for future success (Danciu 2013). Sustainability can be classified into three main aspects, which are society, environment, and economy (Elliott 2013), in which these three aspects must be addressed together, and not independently, as a way of running business by making profit, contributing to the economic system, while maintaining social peace and preserving the environmental system (Danciu 2013). The main concern of the concept of sustainability is sustainable business survival, which may affect business performance positively. On the other hand, economic vulnerability is associated to poor households and those living along poverty line, in which micro-enterprise sustainability among low-income household should be able to keep them safe and away from being economically vulnerable. Hence, based on the above, the present study forwards the following hypothesis:

Hypothesis 3. *Economic vulnerability has a significantly negative effect on micro-enterprise sustainability among the micro-enterprises owned and managed by low-income households in Peninsular Malaysia.*

3. Research Methodology

This study implemented the cross-sectional design by using quantitative data gathered from structured interview sessions in order to determine the effect of economic vulnerability upon competitive advantages, enterprise performance, and sustainability of micro-enterprises owned and managed by respondents from varied development organizations in Peninsular Malaysia. The respondents, who were from low-income and poor households, appeared to display interest in socioeconomic development through provision of working capital and enterprise development training programs. Besides, all information regarding the development organizations and the respondents were retrieved from the eKasih National Poverty Data Bank. The list of those associated to low-income and poor households had been obtained from the eKasih Data Bank. As a result, a list of 400 randomly selected low-income and poor households from Kelantan, Terengganu, Kedah, and Perlis had been derived. Prior to data collection, a team of researchers contacted the selected respondents to briefly explain the purpose of the survey, apart from setting appointments for the interview. The entire data collection process took two months, from October until November 2017. Ultimately, a total of 300 respondents agreed to participate in the survey and allowed the team to visit their premises for the interview.

3.1. Sample Size

The sample size of this study had been determined via G-Power version 3.1. Based on the power of 0.95 (should exceed 0.80 for social and behavioral science research) with an effect size of 0.15, this study seemed to require a sample size of 89 in order to test the model with a predictor. Therefore, in order to avoid any possible limitation that may arise from a small sample size, a total of 300 low-income and poor households residing in Kelantan, Terengganu, Kedah, and Perlis were selected as respondents for this study.

3.2. Measuring Economic Vulnerability

Economic vulnerability is defined as the risk of exposure to potentially harmful events. In fact, some researchers have conceptualized vulnerability as being vulnerability to income poverty, to asset poverty or even a more dynamic concept that reflects the risk of exposure due to a combination of political, natural, and economical disasters. The economic vulnerability, in this study, was measured by using the index given as follows:

$$EV = CV_i AST_A DIV_{si} POV_i \frac{1}{DIV_i} DEP_h$$

EV refers to the vulnerability index that measures the level of economic vulnerability among the participating households. CV denotes the coefficient of variation for the average monthly income earned (last twelve months) among the three groups of households based on their business period (i.e., 1 to 5 years, 6 to 10 years, as well as 11 years and above). $AST_A = \sqrt{\dddot{A}/A_i}$, where $\dddot{A}$ represents the average net worth of enterprise assets within the same group of respondents, while A_i reflects the net worth of enterprise assets. DIV_{si} is the proportion of total income from enterprise income (businesses owned and managed by the respondents). Meanwhile, the effect of poverty level upon economic vulnerability was measured as $POV_i = \sqrt{PLI_{PH}/I_{HH}}$, where I_{HH} refers to the average monthly income for household; whereas PLI_{PH} denotes the income of bottom 40% of the population in Malaysia, which is RM2000 per household per month. The effect of diversification in income sources on economic vulnerability had been measured as $DIV_i = \sqrt{SOI}$, where SOI is the total number of income sources (full-time). Households with higher proportion of dependent members per gainfully employed member ratio have been estimated to appear more vulnerable (DEP_h).

3.3. Research Instrument

The questionnaire employed in this study was designed by using simple and unbiased terms for the respondents to comprehend the items easily and to provide accurate answers based on their own perceptions. The questions were adapted from prior studies with minor alterations where required. The questions that measured Enterprise Performance were adopted from Muniady et al. (2015). As for Sustainability, the items were adopted from Mann and Gazzarin (2004). Lastly, questions for Competitive Advantages were adopted from Norshafizah (2012) with minor modifications.

3.4. Multivariate Normality

This study tested the multivariate normality by using the Web Power online tool. Web Power calculated Mardia's multivariate skewness and kurtosis coefficients, as well as p-values, which indicated that the p-value of Mardia's multivariate skewness and kurtosis was below 0.05, hence affirming multivariate non-normality.

3.5. Data Analysis Method

The PLS-SEM refers to a causal modeling approach that maximizes the explained variance of dependent latent constructs (Hair et al. 2011). Due to the exploratory nature of this study and its non-normality issue, the variance-based structural equation modeling had been applied in this study via partial least squares (PLS-SEM) estimation with its primary objective of maximizing the explanation of variance for the dependent constructs in the structural equation model. The outcomes of the analysis are reported as recommended by Hair et al. (2013) for PLS modeling, which incorporate indicator reliability, internal consistency reliability, convergent validity, discriminant validity, Average Variance Extracted (AVE), and path coefficient estimates.

4. Summary of Findings

4.1. Demographic Characteristics

The data for this study had been gathered from 300 low-income households residing in Kelantan, Terengganu, Kedah and Perlis, Malaysia with most of the respondents (53.7%) being males. As noted in Table 1, a total of 111 (37.0%) of the respondents were in the age range of 31 to 40 years of age, followed by 85 (28.3%) within the age range of 41 to 50 years of age, and 66 (22.0%) in the age range between 51 and 60 years of age. Nevertheless, only 10 (3.3%) respondents were between 20 and 30 years old. As for marital status, 243 (81.0%) of the respondents were married, while the remaining were widowed (7%) and separated from their partners (1.3%). In respect of education background, most respondents (31.7%) claimed to have received primary school education, whereas 81 (27%) of them had completed their secondary school education. Interestingly, two (0.7%) of the respondents

held master's degree, and the remaining 17.0% had never attended school. Next, a total of 200 (66.7%) households had two gainfully employed members, while 69 (23.0%) had only one employed member, and only one (0.3%) household had four gainfully employed members. The remaining 30 (10.0%) households had three employed members. Last but not least, most of the respondents (72.0%) relied on one source of household income, whereas 76 (25.3%) households relied on two sources of income, and the remaining eight households (2.7%) depended on three sources of income.

Table 1. Profiles of the Respondents.

	n	%		n	%
Gender			*Education*		
Male	161	53.7	Never attended school	51	17.0
Female	139	46.3	Primary school	95	31.7
Total	300	100.0	Secondary school	81	27.0
			STPM/Diploma	43	14.3
Age			Undergraduate	28	9.3
20 to 30 years old	10	3.3	Master's degree	2	0.7
31 to 40 years old	111	37.0	Total	300	100.0
41 to 50 years old	85	28.3			
51 to 60 years old	66	22.0	*Marital Status*		
61 years old and above	28	9.3	Married	243	81.0
Total	300	100.0	Single	16	5.3
			Separated	4	1.3
			Divorced	16	5.3
			Widowed	21	7.0
			Total	300	100.0

Note: STPM—Sijil Tinggi Persekolahan Malaysia is a pre-university examination taken by students in Malaysia.
Source: Author(s) own compilation.

4.2. Reliability and Validity

Table 2 depicts the descriptive statistics, along with the criteria applied to evaluate the reliability of the items selected for this study. The mean and standard deviation values for all the variables (i.e., economic vulnerability, competitive advantage, micro-enterprise performance, and micro-enterprise sustainability) are presented in Table 2. Conventionally, the Cronbach's alpha is used as a conservative measure of internal consistency reliability. The Cronbach's alpha reliability analysis displayed that all variables, except for competitive advantage, scored values exceeding 0.7, thus indicating that all the items are reliable. Besides, as the value of Cronbach's alpha for competitive advantage is 0.697, which is greater than 0.6, it had been considered as reliable. According to Hair et al. (2013), it is also appropriate to apply a different measure of internal consistency reliability, known as "composite reliability". The cutoff value for composite reliability is 0.7 (Hair et al. 2011). Table 2 shows that the values of composite reliability for all variables are greater than 0.75, hence signifying reliability. In addition, the Dillon–Goldstein rho values for all indicators exceeding 0.65 appear to confirm the reliability of the items as well. Finally, in order to achieve convergent validity, the AVE value should exceed 0.50. Accordingly, Table 2 displays that the AVE values for all constructs are indeed greater than 0.50, thus indicating acceptable convergent validity. Besides, the variance inflation factors (VIF) values for all variables were lower than 3. This implied that no multicollinearity issue was detected in this study.

Table 2. Reliability and Validity.

Variables	Items	Mean	SD	CA	DG rho	CR	AVE	VIF
Economic Vulnerability	1	0.3375	0.37925	-	-	-	-	-
Competitive Advantage	3	4.7000	0.77325	0.697	0.910	0.802	0.581	1.000
Micro-Enterprise Performance	6	3.5194	0.51446	0.823	0.828	0.870	0.530	1.000
Micro-Enterprise Sustainability	4	4.3317	0.96120	0.782	0.793	0.847	0.582	1.000

Note: Standard Deviation (SD); Cronbach's Alpha (CA); Dillon-Goldstein's *rho* (DG *rho*); Composite Reliability (CR); Average Variance Extracted (AVE); Variance Inflation Factors (VIF). Source: Author(s) own compilation.

The values for loading and cross-loading tabulated in Table 3 showcase that almost all the indicator loadings are greater than 0.7 (except for five items that exceed 0.6), hence indicating reliability. All the items with standardized loadings less than 0.7 were retained for further analysis based on Chin (1998) suggestion that indicators with a loading higher than 0.5 do not need to be discarded. Looking at the cross-loadings shown in Table 3, all the loadings for the indicators seem to be higher than the total cross-loadings, thus affirming discriminant validity. As for discriminant validity based on the Fornell-Larcker criterion, the AVE for each indicator should exceed the construct's highest squared correlation with another construct. As noted in Table 3, all the constructs have met this criterion. Heterotrait-Monotrait Ratio (HTMT) is an estimate of the correlation between constructs, which is consistent with the disattenuated construct score. Based upon the threshold value of 0.9, this study concluded that there was no evidence of insufficient discriminant validity.

Table 3. Loadings and Cross-Loadings.

Items	ComA	PerF	SusT
Competitive Advantage—Item 1	0.764	−0.299	−0.229
Competitive Advantage—Item 2	0.608	−0.287	−0.189
Competitive Advantage—Item 3	0.888	−0.277	−0.145
Micro-Enterprise Performance—Item 1	−0.239	0.797	0.411
Micro-Enterprise Performance—Item 2	−0.316	0.785	0.437
Micro-Enterprise Performance—Item 3	−0.280	0.696	0.347
Micro-Enterprise Performance—Item 4	−0.169	0.629	0.304
Micro-Enterprise Performance—Item 5	−0.239	0.657	0.386
Micro-Enterprise Performance—Item 6	−0.336	0.785	0.449
Micro-Enterprise Sustainability—Item 1	−0.215	0.389	0.653
Micro-Enterprise Sustainability—Item 2	−0.226	0.441	0.793
Micro-Enterprise Sustainability—Item 3	−0.156	0.356	0.820
Micro-Enterprise Sustainability—Item 4	−0.130	0.491	0.775
Fornell-Larcker Criterion			
Competitive Advantage	0.762		
Micro-Enterprise Performance	−0.354	0.728	
Micro-Enterprise Sustainability	−0.218	0.532	0.763
Heterotrait-Monotrait Ratio (HTMT)			
Economic Vulnerability	0.201	0.319	0.159
Competitive Advantage		0.491	0.335
Micro-Enterprise Performance			0.675

Note: (a) The Italic values in the matrix above are the item loadings and others are cross-loadings; (b) Competitive Advantage (ComA), Micro-Enterprise Performance (PerF), Micro-Enterprise Sustainability (SusT). Source: Author(s) own compilation

4.3. Path Analysis

The results of path coefficients, as displayed in Table 4, display that the coefficient value for economic vulnerability on competitive advantage (Hypothesis 1) is −0.203 with a p-value of 0.000, hence indicating that the level of economic vulnerability among the selected micro-entrepreneurs does have a significantly negative impact upon competitive advantage. Besides, the f^2 value of 0.043 signifies a small effect size. Next, the coefficient value for economic vulnerability on enterprise performance among the respondents (Hypothesis 2) is −0.365 with a p-value of 0.000, thus signifying

that the economic level of economic vulnerability among the micro-entrepreneurs has a significantly negative effect on their micro-enterprise performance. Moreover, the f^2 value of 0.102 points out a small to medium effect size. Interestingly, the coefficient for economic vulnerability exhibits a negative ($\beta = 0.169$) and significant (p-value of $0.007 < 0.05$) effect upon micro-enterprise sustainability (Hypothesis 3). Its f^2 value of 0.029 shows a low effect size of economic vulnerability level upon micro-enterprise sustainability.

Table 4. Path Analysis.

Hypo		Coefficient	CI Min	CI Max	*t* Value	*Sig.*	Decision	f^2
H_1	EV → ComA	−0.203	−0.282	−0.135	5.425	0.000	Accept	0.043
H_2	EV → PerF	−0.304	−0.365	−0.251	10.386	0.000	Accept	0.102
H_3	EV → SusT	−0.169	−0.268	−0.096	2.694	0.007	Accept	0.029

Notes: Economic Vulnerability (EV), Competitive Advantage (ComA), Micro-Enterprise Performance (PerF), Micro-Enterprise Sustainability (SusT). Source: Author(s) own compilation.

5. Discussions and Conclusions

This paper presents the investigation of an important dimension concerning household welfare that the conventional measures of poverty has often overlooked, namely economic vulnerability. As such, the effect of economic vulnerability on competitive advantage, enterprise performance, and sustainability of micro-enterprises owned and managed by micro-entrepreneurs who participate in various development initiatives had been determined. The outcomes conclude that engagement in entrepreneurship among low-income households has managed to reduce economic vulnerability. A firm's competitive advantage, performance, and sustainability based on the entrepreneurship setting have been expected to improve the economic wellbeing of a household, thus minimizing economic vulnerability. Besides, the findings of this study support our argument, whereby economic vulnerability appear to be negatively linked to competitive advantage, enterprise performance, and sustainability.

In addition, this present study has extended the literature by depicting the correlations between economic vulnerability, competitive advantage, performance, and sustainability. This is because prior studies mostly focused on the effects of competitive advantage on organizational performance (Kuo et al. 2017); performance and economic wellbeing (Halvarsson et al. 2018); and sustainability as a viable strategy to ascertain future success (Danciu 2013). Nevertheless, based on the notions forwarded by Verrest (2013), where entrepreneurship has been regarded as the most suitable channel to overcome economic vulnerability, this study has managed to bridge the existing gap by providing empirical evidence. In terms of implication, the outcomes of this study should be seriously considered by the development organizations and government agencies. Specific programs such as training and lessons need to be formulated in helping entrepreneurs to first understand the concepts of economic vulnerability, competitive advantage and enterprise performance. Secondly, these programs should aim to help them identify individual-enterprise level competitive advantages, key performance and sustainability elements. This is because it has been proven that enhancing and improving the aspects of competitive advantage, performance, and sustainability among micro-enterprises should be able to increase their ability to withstand uncertainties that may take place in the future, apart from minimizing economic vulnerability. Furthermore, future studies should extend the existing research model by looking at the effects of competitive advantage, enterprise performance and sustainability on economic vulnerability and how this reduced vulnerability affect other elements such as economic growth and social cohesion. As the present study focused only on micro-entrepreneurs and at individual level, the effects of tested variables on macro level is unknown, leaving room for future researchers to answer.

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