



# Examining the Contribution of Valuable and Rare Resources and Capabilities to Performance of Micro Enterprises

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## ABSTRACT

This article examined the contribution of resources and capabilities to the competitiveness and performance of micro enterprises within the context of resource-based view. Cross-sectional survey design was employed. The data came from 183 registered micro enterprises in Catarman. The result showed that the value of resource-capability combinations is inversely related to competitive advantage, while the rareness of resource-capability combinations is positively related. The direct and indirect effects of competitive advantage between value and rareness of resource-capability combinations and performance were established. The moderating effect of business age between competitive advantage and performance was determined. This study added support to the application of resource-based view to micro enterprises in rural areas in a developing economy and unravel important implications for micro enterprises in Catarman.

**Keywords:** Micro Enterprise, Resources, Capabilities, Competitive Advantage, Performance

**JEL Classifications:** M1, M2

## 1. BACKGROUND OF THE STUDY

The impact of small and medium enterprise (SME) in boosting a nation's economy has long been established. Despite its contribution to the economy, Asia SME Finance Monitor identified the need to intensify small enterprises' competitiveness to increase their contribution to national economies (ADB, 2014). The challenge faced by Asian SMEs in terms of maximizing its full development can be attributed to factors such as shortage of resources, lesser economies of scale and scope, higher price of doing business, and weak network (Yoshino and Taghizadeh-Hesary, 2016).

In the Philippines, a vast number of businesses are micro enterprises. Many of these micro enterprises fail the test on how to go beyond the start-up stage. Among the seventeen regions of the Philippines, the 2017 Report of the Philippine Statistics Authority showed that the economy of Eastern Visayas dominated by industry, service, and agriculture, hunting, forestry, and fishery (AHFF) sectors, had

the lowest growth rate. Its economy decelerated by 1.8% ("Gross Domestic Product of the Philippines Highlights for 2017," n.d.). In terms of performance, the industry sector declined by 1.7%. The service and AHFF sectors performance on one hand, recorded a 6.2 and 0.1% growth, which is lower than the 8.4 and 2.4% growth, respectively, in the previous year. ("Gross Domestic Product of the Philippines Highlights for 2017," n.d.). Further, micro enterprises in the Philippines comprised 89.59% of the total businesses in the country; however, its sales and value added contribution is merely 4.9% ("2017 MSME Statistics," n.d.). The disparity in the number of micro enterprises to its percentage contribution to the economy is indicative of a performance problem, which is also a particular performance problem in the Eastern Visayas region where the slowest growth rate in 2017 was documented. It is from this standpoint that this research was conducted.

Studies on the impact of business resources and capabilities to competitive advantage and performance had been done (Cao

et al., 2014; Lin and Wu, 2014; Newbert, 2008; Tajala, 2012). However, empirical studies on the relationships of resource-capability combinations (RCC) to competitive advantage and performance were mostly on small, medium or large enterprises (Grimmer et al., 2017; Pearson et al., 2015; Perényi and Yukhanaev, 2016). Hence, the research question this study aims to answer is how valuable and rare RCC contributed to the competitive advantage and performance of micro enterprises in Catarman, one of the capital towns in the Eastern Visayas region. Understanding the extent of the contribution of resources and capabilities will allow suggestions on how micro enterprises can improve their competitive situation and, ultimately, their performance.

Specifically, the study aimed to address the following questions: What is the degree of relationship of value and rareness of RCC to competitive advantage of micro enterprises in Catarman? What is the possible effect of competitive advantage between value and rareness of RCC and performance of micro enterprises in the area? Will an enterprise with valuable and rare RCC attain higher performance? What is the strength of the relationship of competitive advantage to performance if business age will be factored in? What recommendations can be made to increase the competitive advantage, and ultimately improve the performance of micro enterprises in Catarman? The output of this study will be of interest to academics, researchers and students drawn in the area of business administration and strategic management as it adds empirical evidence to the applicability of RBV to micro enterprises in a rural area of a developing economy.

## 2. LITERATURE REVIEW

### 2.1. Resource-capability Combinations

Valuable, rare, inimitable and non-substitutable (VRIN) business resources and capabilities are heterogeneously scattered among rival businesses and since the dissimilarities can endure for a long period of time, some businesses are able to perform reliably over the others (Barney, 2001). Resources and capabilities are also presumed to be immobile; meaning, it does not move from one business to another for some time making it challenging for other businesses to copy resources or implement the same strategies which contributes to businesses attaining competitive advantage (Barney, 1991). Considering these characteristics, Newbert (2008) advanced the ideas of different RBV scholars further and postulated that the value of resources or the value of capabilities will only result into the attainment of competitive advantage if valuable resource-capability combinations were exploited. He further stated that “common resources (or capabilities) can be essential to the attainment of a competitive advantage provided these are paired with other capabilities (or resources) in such a way that the resulting combination in which they are exploited is rare” (Newbert, 2008. p. 748). Moreover, in maintaining a sustained competitive advantage, the VRIN characteristics should be preserved according to Enriquez-De-La-o (2015).

Various studies empirically testing the influence of RCC on competitive advantage and/or performance found significant relationship. A study on Turkish firms operating in different industry revealed that intangible resources and capabilities have

higher influence on firm performance as against tangible resources (Kamasak, 2017a). A study on Chinese clothing company suggested a direct relationship between fundamental resource, dynamic capability, upgrading capability to process performance (Cao et al., 2014). Ferreira and Fernandes (2017) found that rareness of resources and capabilities does not infer the likelihood of achieving competitive advantage. Tajala (2012) examined large and medium sized Croatian companies and found that companies with more valuable and rare resources achieved greater degree of sustainable competitive advantage and performance. In this paper, the combined effects of resources and capabilities on micro enterprises' performance were examined.

### 2.2. Mediating Effect of Competitive Advantage in Valuable and Rare RCC and Performance Relation

Resource based view seeks to explain how a business can achieve competitive advantage that will ultimately lead to better performance (Barney, 1991). According to Tajala (2012) competitive advantage is a widely used concept in strategic management literature, but not precisely explained thus, it is sometimes used alternately as performance. On the other hand, Newbert (2008) noted the particularity between competitive advantage and performance saying that competitive advantage refers to attained economic value from taking advantage of resources and capabilities of a business while performance is the result of the economic value captured in business operation. A number of studies have advanced the difference between the two concepts and presented association between the two (Ferreira and Fernandes, 2017; Ismail et al., 2010; Newbert, 2008; Tajala, 2012).

Studies have presented the mediating role of competitive advantage between resources and/or capabilities to business performance. On testing the mediating effect of competitive advantage, Newbert (2008), revealed that valuable and rare RCC have an indirect effect on performance because value did not correlate with performance; however, competitive advantage was found to fully mediate the relationship between rareness and performance. Kamukama et al. (2017) found that while competitive advantage reduces the influence of managerial competence to financial performance, it can also mean that banks with rare abilities have a higher possibility of achieving competitive advantage rising to superior financial performance. In another study, valuable, rare resources and capabilities were found to correlate with competitive advantage and the latter leads to above average performance (Tajala, 2012). It is therefore expected that businesses who have higher competitive advantage will achieve better business performance.

Further, literature empirically testing RBV by using performance as the dependent variable, operationalized performance in three approaches: solely in absolute terms, solely in relative terms, or both in absolute and relative terms (Newbert, 2014). In her work on testing VRIN framework, (Tajala, 2012), operationalized performance solely in relative terms by measuring the manager's perceptions of both financial and nonfinancial performance and found a direct effect on the value and rareness of RCC and levels of sustainable competitive advantage and performance. Kamasak (2017a), citing Galbreath and Galvin (2008) employed perceived measures of performance for the last 3 years of business operation

to “proximate a notion of sustained performance and to mitigate against temporal fluctuations” (p. 262). The use of subjective measures of performance and competitive advantage was validated by Vij and Bedi (2016) who found a strong positive connection between subjective business performance and objective business performance measures. However, as observed by (Newbert, 2014) scholars operationalized performance as dependent variable in RBV studies used absolute measures of performance in contradiction to their theoretical viewpoint that performance is assessed in terms of its direct comparison to the performance of rival businesses. Ismail et al. (2010) pointed out that performance should be able to measure both financial and nonfinancial elements to show a stronger and wider performance attribute. Hence, in this study, subjective measure of performance was employed. Performance was measured by asking the respondents to rate on a scale of 1 to 4 their financial status measured in terms of growth in sales and profitability, and their nonfinancial performance measured in terms of marketing and market share (Delaney and Huselid, 1996) over the past three years compared to other businesses in the locality. A higher rating means a higher level of business performance.

### 2.3. Business Age as Moderating Variable

Researches have recognized the impact of business age in the firm’s performance. Lower business age was found to result in an increased chance of improved performance (Wood, 2006). On one hand, Al Roomi and Ibrahim (2004) established that business age has no meaningful influence on the performance of home-based businesses. The moderating effect of business age was found to enable food manufacturing companies to develop routines that enable better performance (Hui et al., 2013). Business age was also found to have no significant impact on the firm’s performance after 20 years of operation (Radipere and Dhliwayo, 2014).

## 3. THEORETICAL FRAMEWORK

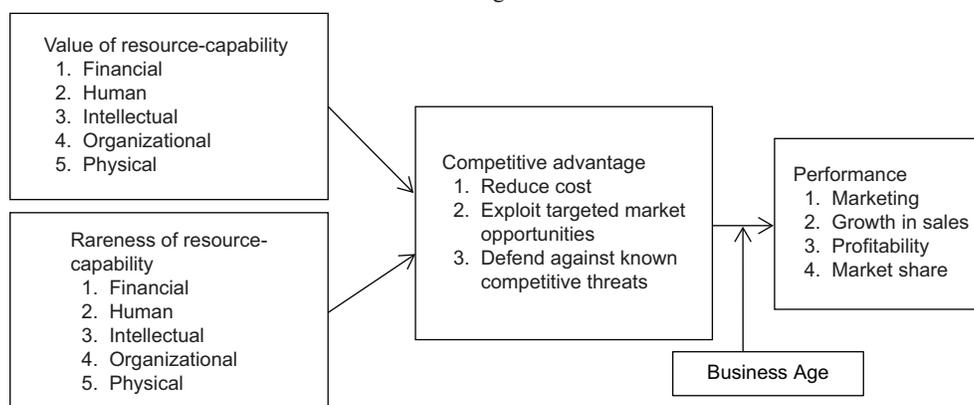
Resource based view (RBV) theory postulated that VRIN resources joined with capabilities in a manner that offers additional value to clienteles, results to competitive advantage (Barney, 1991). Different types of resources were identified to have significant impact on competitive advantage and performance of businesses.

The study of Godwin-Opara (2016) inferred that lack of financial resources are factors that affect the growth of small business; finding the reluctance of banks and other funding agencies to extend credit due to lack of collateral or security. Dunford et al. (2001) stated that competitive advantage is a function of different human resource factors. Intellectual properties such as patents and copyrights are also resources that cannot be easily copied by competitors because it is legally protected, hence, it fosters sustainable competitive advantage (Galbreath and Galvin, 2006) citing Hoopes and Madsen (2008). A study on manufacturing firms revealed that tangible or physical resources produced significant influence in firm performance (Kamasak, 2017b). A study that evaluated superior resource allocation from merchants found that organizational competence of an enterprise to form strong networks with its dealers firmly result to competitive advantage (Pulles et al., 2016). In contextualizing different resources, Newbert (2008) identified five types of resources and capabilities based on the discussion of Barney (1991) and suggestions from a group of experts. These are financial, human, intellectual, organizational and physical. Similar types of resources were used to examine the valuable and rare resources and capabilities of micro enterprises.

Figure 1 illustrates the operational framework of this study. Taking into consideration the objectives and the respondents, the model advanced by Newbert (2008) was adopted with the addition of business age as moderating variable. Researches have recognized the impact of business age in the firm’s performance and considering the differing effects of business age to performance, testing for its influence in the competitive advantage - performance relation will contribute substantially in recommending policy actions for micro enterprises. Thus, the following hypotheses were tested in this study:

- H<sub>1</sub>: Value of RCC is positively related to competitive advantage.
- H<sub>2</sub>: Rare RCC is positively related to competitive advantage.
- H<sub>3</sub>: An enterprise with valuable RCC will attain higher performance.
- H<sub>4</sub>: An enterprise with rare RCC will attain higher performance.
- H<sub>5</sub>: The effect of valuable and rare RCC on performance will be mediated by competitive advantage.
- H<sub>6</sub>: Business age will moderate the effect of competitive advantage to performance.

**Figure 1:** Operational framework for performance as affected by valuable and rare RCC by competitive advantage and strengthened by business age



## 4. METHODOLOGY

### 4.1. Sample and Data

The participants in this study were owner-managers of micro enterprises in Catarman, Northern Samar, composed of 96 (52.5%) females and 87 (47.5%) males. Majority or 101 (55.2%) of businesses were into retailing and 82 (44.8%) were service providers. Business ages ranged from 3 to 40 years ( $M = 8.2$ ,  $SD = 6.21$ ). Only sole proprietor micro enterprises registered as retailers and service providers were considered since they comprised the large majority of the population. Micro enterprise with a legal entity registered under corporations, cooperatives or associations were further removed from the list provided by the Department of Trade and Industry (DTI) in Northern Samar since the unit of analysis of this study were micro enterprises owned and operated by sole proprietors. The process yielded a remaining number of 899 micro enterprises. Out of 300 questionnaires distributed, 192 were collected and 183 responses were found to be useable for this study. Participants whose declared business age is <3 years were not included in the sample. The questionnaire of Newbert (2008) was adopted. Except for the addition of the profile section, the questionnaire's original form was utilized. To ensure that participants understood what were asked in the questionnaire, *Waray* translations were provided. Five *Waray* entrepreneurs were first asked to answer and comment on the questionnaire with translation. The translation was found to be precise and easily understandable. The instrument with translation was pretested for internal consistency to 30 micro entrepreneurs in Catarman and the result was acceptable to good as no alpha value was <0.700 (Tavakol and Dennick, 2011). Reliability analysis was again tested for the 183 respondents and the result is shown in Table 1.

### 4.2. Path Diagram

The data was analysed using Lavaan sem package in R. Since the aim is to examine the direct, indirect as well as total effects and

moderating effect of variables in the study, structural equation modelling (SEM) was used. According to Fox (2006) SEM allows testing for simple as well as complex models and has "the ability to estimate structural equations in observed variable models by two-least squares." Through SEM, the estimated impact of valuable and rare RCC in explaining performance was examined. The result offered a more suitable model for mediation and other types of causal analyses (Gunzler et al., 2013). Further, SEM already considered measurement error and model specification (Sarstedt et al., 2020). From the operational framework, the model hypothesis indicating the path diagram shown in Figure 2 was used to analyse the data.

## 5. RESULTS

### 5.1. Correlations

Correlation is presented in Table 2 to identify variables with close association. All statistical tests used 0.05 alpha. No variance inflation factor value exceeded 4, hence no harmful collinearity was encountered (Hair et al., 1995). The Spearman rank-order test revealed that value and rareness of RCC were strongly negatively correlated,  $r(183) = -0.653$ , and were significant ( $P < 0.001$ ). Value of RCC and competitive advantage were negatively correlated but the correlation was weak,  $r(183) = -0.444$ , while rareness of RCC and competitive advantage had weak positive correlation  $r(183) = 0.425$ . Both correlations were significant ( $P < 0.001$ ). Competitive advantage had weak positive correlation with performance,  $r(183) = 0.326$  and was significant ( $P < 0.001$ ).

### 5.2. Path and Mediation Analysis

In computing for path coefficients and mediation effect, SEM in R with maximum likelihood as the method of estimation was employed. Resampling percentile bootstrapping was also conducted since it does not assume that the indirect effect in the sampling distribution is normal. The result showed that there were paths projected in the model hypotheses that were not supported by the data like the value of RCC which was hypothesized to be positively related to competitive advantage. Its path coefficient is statistically significant but negative ( $\beta = -0.09$ ,  $P < 0.001$ ), rejecting hypothesis 1. The coefficient implied that for every one unit increase in the value of RCC utilized by micro enterprises, there was a 0.09 unit decrease in the level of their competitive advantage. This suggests that the more valuable respondents' RCC, the lesser their competitive advantage will be. In the case of rare RCC, the result revealed a positive significant relationship with competitive advantage ( $\beta = 0.073$ ,  $P < 0.001$ ), failing to reject hypothesis 2. The coefficient implied that for every one unit increase in the rareness of RCC, there was a 0.073 unit increase in the level of competitive advantage of the micro enterprises, indicating that the rarer the resources and capabilities utilized by micro enterprises, the higher the level of competitive advantage will be.

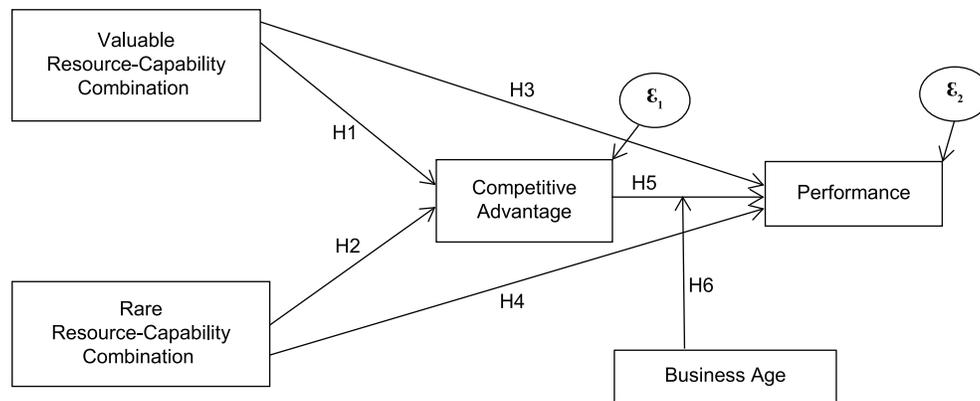
The mediator variable competitive advantage was found to have significant impact on performance. The indirect effect of the mediator variable between the value of RCC and performance was negative and significant ( $\beta = -0.037$ ,  $P < 0.001$ ). Upon inspection of the result of the direct effect of value of RCC on performance, it yielded a statistically significant and positive

**Table 1: Construct reliability**

Latent variable	Cronbach $\alpha$	Item	$\alpha$ if item dropped
Performance (P)	0.852	P_Mk	0.823
		P_GS	0.778
		P_Prif	0.798
		P_MS	0.846
Competitive Advantage (CA)	0.803	CA_FR	0.744
		CA_HR	0.735
		CA_IR	0.892
		CA_OR	0.746
		CA_PR	0.742
Value (V)	0.958	V_FR	0.956
		V_HR	0.944
		V_IR	0.954
		V_OR	0.944
		V_PR	0.942
Rareness (R)	0.962	R_FR	0.954
		R_HR	0.951
		R_IR	0.953
		R_OR	0.955
		R_PR	0.954

FR: Financial resource; HR: Human resource; IR: Intellectual resource; OR: Organizational, Resource, PR: Physical resource, Mk: Marketing, GS: Growth in Sales, Prf: Profitability, MS: Market share

**Figure 2:** Model hypothesis showing the projected path diagram of relationship of performance as influenced by valuable and rare RCC by competitive advantage and moderated by business age



**Table 2: Spearman correlation matrix (n = 183)**

Variables	BA	P	CA	V	R
Business age (BA)	-				
Performance (P)	0.029	-			
Competitive advantage (CA)	0.049	<b>0.326</b>	-		
Value (V)	0.021	0.034	<b>-0.444</b>	-	
Rareness (R)	-0.123	0.117	<b>0.425</b>	<b>-0.653</b>	-

Bolded statistics mean correlated at  $P < 0.001$

**Table 3: Indirect, direct effects from the proposed model**

Independent Variables	Indirect effect	Direct effect	Total effect
Value of RCC	-0.037*** (0.009)	0.042** (0.018)	0.005 (0.018)
Rareness of RCC	0.026*** (0.007)	-0.003 (0.015)	0.023 (0.015)

Standard errors are reported in the parenthesis. \*\*\*. \*\*\*indicates significance at 99% and 95% level, respectively

coefficient ( $\beta = 0.042$ ,  $P = 0.021$ ), failing to reject hypothesis 3. This implied that the higher the value of RCC, the more likely will micro enterprise’s performance will improve. On the other hand, the indirect effect of rareness of RCC on performance is positive and statistically significant ( $\beta = 0.026$ ,  $P < 0.001$ ) also but its direct effect is negative and statistically insignificant ( $\beta = -0.003$ ,  $P = 0.844$ ), rejecting hypothesis 4. This suggests that the rareness of RCC utilized by micro enterprises does not right away account for improved performance. Table 3 shows the indirect, direct and total effects of value and rareness of RCC on performance.

Since the findings revealed a significant influence of the indirect and direct effect of value of RCC on performance, competitive advantage partially mediated the relationship between value of RCC and performance. On the other hand, rareness of RCC had significant indirect effect only. Since the indirect influence or rare RCC is greater than its direct influence, the result implied that competitive advantage fully mediated the relationship between rare RCC and performance. The findings supported hypothesis 5, confirming the mediation effect of competitive advantage between value of RCC and rareness of RCC on the outcome variable, performance. Figures 3 and 4 showed the resulting path analysis and mediation of valuable RCC on performance and rare RCC on performance, respectively.

The goodness-of-fit test statistics for valuable RCC model in Figure 3 revealed that the Chi-square test was not significant, indicating good model fit. Since the sample size used is only 183, the Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) were also checked to determine model fitness as both indices are not sensitive to sample size. The result showed a good model fitness ( $X^2(8, 183) = 8.62$ ,  $P = 0.376$ ,  $CFI = 0.990$ ,  $TLI = 0.986$ ). Both CFI and TLI were above the 0.9 cut-off

mark, indicating very good fit (Stevens and Pituch, 2016). The root mean square error of approximation (RMSEA) was equal to 0.021, indicating a close fit as it is below the 0.05 cut-off value (Stevens and Pituch, 2016).

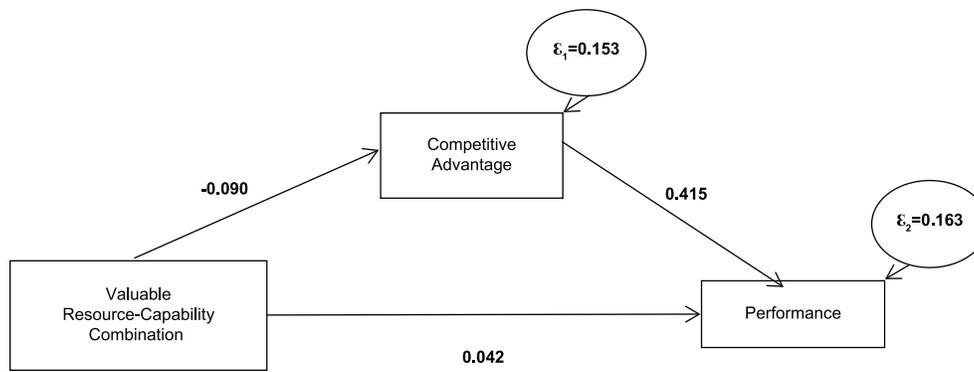
When the overall fit of rare RCC model in Figure 4 was assessed, it resulted to a significant Chi-square test and fit indices below the 0.9 cut-off ( $X^2(11, 183) = 17.3$ ,  $P < 0.001$ ,  $CFI = 0.852$ ,  $TLI = 0.796$ ) which indicated acceptable to poor fitting. However, its RMSEA index was exactly equal to 0.08 which is well within the cut-off value to be considered an acceptable fit (Stevens and Pituch, 2016).

### 5.3. Moderation Analysis

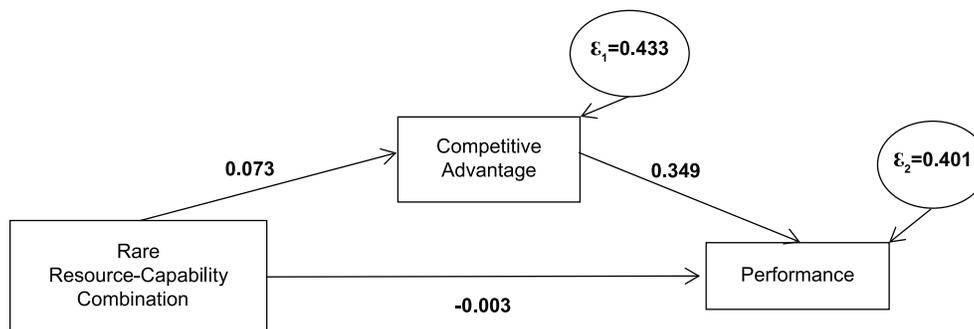
To test the hypothesis that business age moderates the relationship between competitive advantage and performance of micro enterprise, *lm.beta* package in R to generate standardized regression coefficients was utilized. The moderation model showed that the test statistics is not significant ( $BP=5.26$ ,  $P = 0.154$ ), therefore, homoscedasticity is assumed. Shapiro-Wilk test for normality of residuals showed that the residuals are normally distributed ( $W=0.986$ ,  $P = 0.064$ ). Further, no problem on misspecification was identified when Ramsey Regression Equation Specification Error Test (RESET) was conducted ( $RESET= 1.98$ ,  $P = 0.141$ ).

The moderation analysis result shown in Table 4 revealed that the interaction term has statistically significant negative effect ( $\beta = -0.021$ ,  $P = 0.025$ ). To better interpret the result, the predictor variables business age and competitive advantage were mean centered. The result suggested that the predictive relationship between competitive advantage and performance was significant and positive ( $\beta=0.397$ ,  $P < 0.001$ ) at the mean of business age while the predicted relationship between business age and performance is

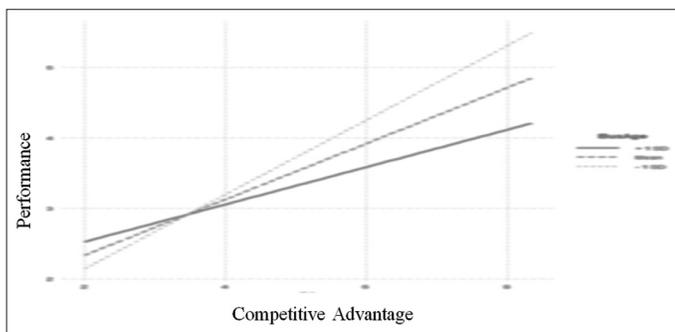
**Figure 3:** Path diagram reflecting the path coefficients of relationship of performance as influenced by valuable RCC and partially mediated by competitive advantage



**Figure 4:** Path diagram reflecting the path coefficients of relationship of performance as influenced by rare RCC and fully mediated by competitive advantage



**Figure 5:** The interaction plot of business age and competitive advantage on performance



negative but not statistically significant at the mean of competitive advantage ( $\beta=-0.003$ ,  $P < 0.711$ ).

The interaction between business age and competitive advantage was probed even more by generating Johnson-Neyman’s interval shown in Figure 5. The plot showed that all estimated values of competitive advantage and performance were significant and positive when business age is one standard deviation above the mean ( $\beta=0.27$ ,  $P < 0.001$ ), at the mean ( $\beta=0.40$ ,  $P < 0.001$ ), and one standard deviation below the mean ( $\beta=0.53$ ,  $P < 0.001$ ).

## 6. DISCUSSION AND CONCLUSIONS

In light of the dearth in literature on the applicability of RBV in understanding the competitive advantage and performance of micro enterprises, and the aim to support performance improvement of micro enterprises in rural areas, this study examined how value and rareness of RCC contributed to the competitive advantage and performance of micro enterprises in Catarman. Correspondingly, the degree of relationship of value of RCC, as well as the degree of relationship of rareness of RCC to competitive advantage was determined. Further, the possibility of competitive advantage mediating the relationships between value and rareness of RCC and performance of micro enterprises, and the moderating effect of business age between competitive advantage and performance were examined.

The findings revealed that the more valuable the RCC of micro enterprises in Catarman, the lesser their competitive advantage.

**Table 4: Performance on business age and competitive advantage**

Indicators	Model 1
Intercept	2.96*** (0.047)
Business age	-0.003 (0.008)
Competitive advantage	0.397*** (0.070)
Bus age: Competitive advantage	-0.021* (0.009)
R	0.632
R <sup>2</sup>	0.155
Adjusted R <sup>2</sup>	0.141
No. of observations	183

Standard errors are reported in the parenthesis. \*\*\*, \*\*\*, indicates significance at 99% and 95% level, respectively

This result is in contrast to the findings of some scholars establishing a positive relationship between valuable RCC and competitive advantage (Ferreira and Fernandes, 2017; Newbert, 2008; Tajala, 2012). The outcome revealed that the more valuable respondents' RCC, the lesser their competitive advantage, suggesting a low perception of competition in Catarman business climate. The study of Katila and Shane (2005) stating that contrary to common belief "low-competition, resource-rich, and high demand environments" (p. 826) do not support innovation might explain this result. Putting it in the resource-based perspective, resource-capability and competitive advantage will correlate positively in climates where there is perceived high competition or lack of resources, forcing a need to innovate (Katila and Shane, 2005). Therefore, under high competition environment, positive correlation can be expected, but in low competition environment, there will be negative correlation. Considering the inverse relationship of value of RCC and competitive advantage, it is suggested that the local government of Catarman and the Department of Trade and Industry should spur the competitive climate by supporting interested parties with great enterprising ideas who lack the proper funding to upgrade their business.

Examination of the relationship between rareness of RCC and competitive advantage showed that the rarer the RCC utilized by Catarman micro enterprises, the greater the possibility that they will attain competitive advantage, consistent with the findings of Newbert (2008) and Tajala (2012). Since competitive advantage is positively predicted by rareness of RCC utilized, Catarman micro enterprises may consider investing on assets and/or capabilities that are unique or should consider combining resources and capabilities in a very different way to increase their competitiveness.

When mediating effect of competitive advantage was examined, it was found to have a partial intervening effect on value of RCC and performance but a full mediating effect on rareness of RCC and performance. Hence, it is recommended that micro entrepreneurs in Catarman should strategically consider the importance of identifying and developing competitive advantage through investing and creating valuable and rare RCC in order to attain higher performance.

The study was also able to establish a buffering effect of business age, suggesting that the effect of competitive advantage to performance of micro enterprises in Catarman is moderated by business age. As business age increase, the influence of competitive advantage on performance is positive but its strength may likely decrease due to the inverse relation of interaction term to performance. Hence, it is recommended that the study on the lifecycle and maturity of micro enterprises be looked into for further study.

The low explanatory power in the models can be attributed to different types of businesses included in the sample for analysis (Galbreath and Galvin, 2006) and the exclusion of other variables that may have great impact on the attainment of competitiveness of micro enterprises, thus, a limitation of this study. The data was collected using a survey questionnaire that may be subject to

common self-report bias. Respondents evaluated their performance and competitive advantage as against their competitors in a span of a 3-year period, which may not suffice to establish performance and competitive advantage. To minimize this particular limitation, estimated sales growth from previous year was asked during survey for comparison purposes during data analysis. Finally, further study on resources and capabilities of micro enterprises may include the other two characteristics of the VRIN framework – inimitability and network or organization to better comprehend the applicability of RBV in influencing the competitiveness and performance of micro enterprises.

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