THE RELATIONSHIP BETWEEN ORGANISATIONAL COMPETITIVE ADVANTAGE AND PERFORMANCE MODERATED BY THE AGE AND SIZE OF FIRMS

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ABSTRACT

It has been argued that achieving a position of competitive advantage is a necessary precursor to a firm's significant performance. This paper will empirically examine the potential moderating variables that could affect the relationship between a firm's competitive advantage and performance, namely the firms' age and size. By examining the relative moderating effects of these variables, this paper delivers valuable information to firms, specifically with regard to strategic management directed toward performance and attaining a competitive advantage. This research was conducted among 127 manufacturers listed in the 2008 Federation of Malaysian Manufacturers Directory. A cross-sectional study was conducted using a structured questionnaire to obtain responses from the manufacturers. A two-way ANOVA shows that only the age of firms is a significant moderator in the relationship between competitive advantage and performance, and that this relationship is stronger for older firms. The size of firms does not significantly moderate the relationship between competitive advantage and performance. Despite the non-significant moderating effect of firms' size, overall, this study provides empirical support for the Resource-Based View (RBV) of Malaysian manufacturers regarding the issue of competitive advantage.

Keywords: organisational competitive advantage and performance, Resource-Based View (RBV), firms' age and size

INTRODUCTION

Attaining a position of competitive advantage and enhancing a firm's performance relative to its competitors are two of the main objectives that

business organisations should strive to achieve. In order to attain a competitive advantage that can not only match that of their business rivals' but also surpass industrial performance averages, business organisations must first comprehend the relationship between the internal strengths and weaknesses of their organisation, as well as the potential effects on their firm's competitive advantage and performance. International businesses and multinational corporations (MNCs) such as Sony, Toyota and Intel have achieved and sustained their longstanding competitive advantage through various strategic management practices. In the present era of globalisation, industries and enterprises compete and confront each other on the global scale. As such, Malaysian business enterprises, particularly manufacturers, have much to learn from the strategic management practices of the so-called inter- and multinational corporate "giants" regarding sustaining a competitive advantage.

The Malaysian manufacturing sector will remain a vital component of the economy, as it is one of the largest contributors to the country's economic growth as measured by its contribution to the gross domestic product (GDP), which is estimated at 29.8% for 2008, compared to 30.1% for 2007 (Ministry of Finance, 2008). The Malaysian Treasury estimated that the manufacturing sector would grow by 4.7% in 2008 and 4.3% in 2009 (Ministry of Finance, 2008). The manufacturing sector was forecasted to expand in 2009, in tandem with the stable performance of export oriented-industries and continued expansion of domestic demand (Ministry of Finance, 2008). The Malaysian Government continues to further expand and extend the potential of value-added activities in the country, for example, by introducing measures for existing manufacturers to develop higher technology and by making new investments in high-end manufacturing to enhance their competitiveness (Ministry of Finance, 2007). The government has planned to focus on expanding the capacity of building and productivity-enhancing activities via fiscal incentives to increase the competitiveness of domestic firms (Ministry of Finance, 2008). As such, the issue of the competitive advantage of domestic manufacturers is high on the national economic agenda.

It has been argued that achieving a position of competitive advantage is the precursor to the significant performance of a firm (Barney, 1991; Fahy, 2000). Competitive advantage results from a long list of factors, including operational efficiency, mergers, acquisitions, levels of diversification, types of diversification, organisational structures, composition and style of upper management, human resource management, manipulation of political and social influences in the market, conformity to various interpretations of socially responsible behaviours, international expansion, cross-cultural adaptation, and various other organisational and industry-level phenomena (Ma, 1999a; 1999b; Flint & Van Fleet, 2005; King, 2007). In light of this background, this paper will empirically examine the moderating variables that could affect the relationship

between a firm's competitive advantage and performance. Among the potential moderators in the relationship between competitive advantage and performance is the age and size of a firm. By having information on such potential moderating effects, the strategic business decisions of managers can be guided toward improvements in their companies' overall position.

LITERATURE REVIEW

Competitive Advantage

The pursuit of competitive advantage is an idea very much at the heart of the strategic management literature (Burden & Proctor, 2000; Fahy, 2000; Ma, 2000, 2004; Barney 2001a; 2001b; 2007; Lin 2003; Fahy, Farrelly, & Quester 2004; Cousins, 2005; Porter & Kramer, 2006; Liao & Hu, 2007). Understanding the sources of sustained competitive advantage has become a major area of study in strategic management (Porter, 1985, 1991; Barney, 1991; Peteraf, 1993; Ma, 1999a, 1999b, 2004; Flint & Van Fleet, 2005; King, 2007). The resource-based view stipulates that the fundamental sources and drivers of competitive advantage and superior performance are chiefly associated with the attributes of resources and capabilities, which are valuable and costly-to-copy (Barney, 1986; 1991; 2001a; Conner, 1991; Mills, Platts & Bourne, 2003; Peteraf & Bergen, 2003). Several other studies support the importance of this resource-based view (Hult & Ketchen Jr., 2001; Ramsay, 2001; Foss & Knudsen, 2003; Gottschalg & Zollo, 2007). When this strategy is well-formulated and implemented, it can significantly affect a firm's level of competitive advantage (Richard, 2000; Arend, 2003; Powell, 2003; Porter & Kramer, 2006). The resource-based view provides an avenue for organisations to plan and execute their organisational strategy by examining the role of their internal resources and capabilities in achieving competitive advantage (Kristandl & Bontis, 2007; Sheehan & Foss, 2007).

In this line of research, specific attention will be given to "competitive advantage" from the dimension of "value and quality", the main elements of which can be labelled: "cost-based", "product-based", and "service-based". Previous studies have shown a significant relationship between cost-based advantage and organisational performance. Firms that enjoy cost-based competitive advantages over their rivals — for example, lower manufacturing or production costs, lower cost of goods sold, and lower-price products — have been shown to exhibit comparatively better performance (Gimenez & Ventura, 2002; Morgan, Kaleka, & Katsikeas, 2004). Furthermore, a significant relationship between product-based advantage and the performance of organisations has also been identified. Firms that experience a product-based

competitive advantage over their rivals — for example, higher product quality, packaging, design and style — have been shown to achieve relatively better performance (Gimenez & Ventura, 2002; Morgan et al., 2004). Similarly, research has further illustrated that there is a significant relationship between service-based advantage and organisational performance. Firms that benefit from service-based competitive advantage compared to their rivals — for example, more product flexibility, accessibility, delivery speed, reliability, product line breadth and technical support — have demonstrated comparatively better performance (Gimenez & Ventura, 2002; Morgan et al., 2004).

Performance

Competitive advantage and firm performance are two different constructs with an apparently complex relationship (Ma, 2000). Overall, though, studies have shown a significant relationship between competitive advantage and performance (Ma, 2000; Fahy, 2000; Gimenez & Ventura, 2002; Wang & Lo, 2003; Wiklund & Shepherd, 2003; Bowen & Ostroff, 2004; Morgan et al., 2004; Ray, Barney, & Muhanna, 2004).

Indeed, the issue of heterogeneous firm performance and the determination of such factors is an important issue in the field of strategic management. Studies tend to link such performance differences to either industry-specific factors or to firm-specific factors, with mixed results (Hawawini, Subramaniam, & Verdin, 2003; 2005; McNamara, Aime, & Vaaler, 2005). This diversity has led some strategic management researchers to question the ability of empirical studies to consistently and objectively explain differences in organisational performance, broadly criticising research sampling practices (Short, Ketchen Jr., & Palmer, 2002), performance measurement methods and dimensions (Denrell, 2004; Starbuck, 2004) and the effects of industry velocity (Brauer & Schmidt, 2006). In short, an effective performance measurement system should be able to capture not only the financial aspect of business performance but also the non-financial elements, so as to present a clearer and wider perception and dimension of performance.

For the present analysis, specific attention will be accorded to "performance" from the perspective of both "financial" and "non-financial", the main elements of which consist of "sales-based" and "organisational-based". Studies have found that there is a significant relationship between competitive advantage and the sales-based performance of organisations, when sales-based performance was measured by the level of sales revenue, profitability, return on investments, productivity, product added value, market share and product growth (Wang & Lo, 2003; Neely, 2005; Falshaw, Glaister, & Ekrem, 2006). In addition, other studies have also further illustrated a significant relationship between competitive

advantage and the organisational-based performance of organisations, when organisational-based performance was measured by the emphasis on efficient organisational internal processes, customer satisfaction, employee development and job satisfaction (Wang & Lo, 2003; Neely, 2005).

THE AGE AND SIZE OF FIRMS

As stated above, the age and size of firms will be examined as respective moderators in the relationship between competitive advantage and performance. Ketokivi and Schroeder (2004), Morgan et al. (2004) and Ainuddin, Beamish, Hulland, and Rouse (2007) establish a significant moderating role of firms' age in the relationship between competitive advantage and performance, when the age of firms was defined in terms of "new and old plants" (Ketokivi & Schroeder, 2004), "the number of years firm has been engaged in exporting operations" (Morgan et al., 2004) and "the age of international joint venture (IJV) formation" (Ainuddin et al., 2007). As experience is perceived to be a contributing factor towards the enhancement of firm performance, older firms are hypothesised to perform better than newer firms. However, research has shown mixed results in the relationship between competitive advantage and performance moderated by the size of firms. Ketokivi and Schroeder (2004) and Morgan et al. (2004) report significant moderating role of the size of firms in the relationship between competitive advantage and performance, where the size of firms is described in terms of "the number of employees" (Ketokivi & Schroeder, 2004) and "the number of full-time employees" (Morgan et al., 2004). On the other hand, Ainuddin et al. (2007) find a non-significant moderating effect of the size of firms in the relationship between competitive advantage and performance, where the size of firms is defined in terms of "the number of employees in the IJV formation" (Ainuddin et al., 2007). Nonetheless, as size or scale is presumed to be a critical factor in the performance of firms, it is thought that large firms will fare better than small and medium firms.

Hypotheses

This paper advances the following hypotheses:

H_1: The relationship between organisational competitive advantage and performance is moderated by the age of firms, and this relationship is stronger for older firms.

H_2: The relationship between organisational competitive advantage and performance is moderated by the size of firms, and this relationship is stronger for larger firms.

METHODOLOGY

This research was conducted among manufacturers listed in the Federation of Malaysian Manufacturers Directory 2008. A cross-sectional study using a structured questionnaire was used to obtain responses from the manufacturers. Specifically, this research questionnaire was developed based on modifications, extensions and combinations of past studies on organisational competitive advantage (15 items adapted from Gimenez & Ventura, 2002; Morgan et al., 2004; Ray et al., 2004) and performance (13 items adapted from Wang & Lo, 2003; Neely, 2005; Falshaw et al., 2006; Ainuddin et al., 2007). Using a 5-point Likert-scale, competitive advantage was measured based on an interval scale (non-categorical variable) (Sekaran, 2005) from 1 (very low) to 5 (very high). The basis of measurement for competitive advantage was the summed score of the 15 items in the questions. The main elements included cost-based advantage (two items: lower manufacturing costs and lower-priced products), product-based advantage (six items: product differentiation, packaging, design, style, product quality and accessibility) and service-based advantage (seven items: product line breadth, reliability, flexibility, product innovation, delivery speed, technical support and value for customer) (Gimenez & Ventura, 2002; Morgan et al., 2004; Ray et al., 2004). Similarly, performance was measured based on an interval scale (non-categorical variable) (Sekaran, 2005) from 1 (very low) to 5 (very high). A summed score of the 13 items in the questions was the basis of measurement for performance, the main elements of which included sales-based performance (nine items: the level of sales revenue, profitability, return on investments, return on assets, manufacturing productivity, product added value content, added value per employee, sales growth and market share for product) and organisational-based performance (four items: the emphasis on efficient organisational internal processes, customer satisfaction, employee development and job satisfaction) (Wang & Lo, 2003; Neely, 2005; Falshaw et al., 2006; Ainuddin et al., 2007).

The age of firms was measured by the number of years the company had been in operation (Morgan et al., 2004; Ainuddin et al., 2007; Hashim & Zakaria, 2007), based on nominal or ordinal scales (categorical variable) (Sekaran, 2005). The size of firms was measured by the firms' number of employees currently in employment (Morgan et al., 2004; Ainuddin et al., 2007; Hashim & Zakaria, 2007), based on nominal and/or ordinal scales (categorical variable) (Sekaran, 2005). A pilot study was initially conducted to establish the reliability of the scales and measurements of the questionnaire. The result of the pilot study found Cronbach's alpha coefficients to be well above the minimum-required alpha coefficient value of 0.70 (Nunnally, 1978; Ray et al., 2004). Exploratory and confirmatory factor analyses (EFA and CFA) were carried out; in brief, the number of items (competitive advantage = 15; performance = 13), the number of

factors (competitive advantage = 4; performance = 2) and the percentage of variance explained (competitive advantage = 69.54; performance = 66.50) were statistically acceptable. Overall, the research model fit the data, supporting the reliability and validity of this method.

In the present study, we paid special attention to manufacturing businesses because as far as Malaysia is concerned, manufacturing activities are the mainstay of the economy and manufactured products are estimated to contribute RM503.998 billion (76.2%) to the 2008 yearly total gross exports of RM661.166 billion, as compared to RM138.986 billion (21.0%) from commodities such as agricultural and mineral products (Ministry of Finance 2008). Furthermore, Malaysia's external trade is largely with advanced economies such as the United States of America (USA), Europe, Japan and Singapore, with exports contributing 13.0%, 11.3%, 9.9% and 15.1% respectively of the total external trade of RM326.898 billion for the period January–June 2008 (Ministry of Finance, 2008). As such, particular attention was given to manufacturers in Malaysia originating from the four main countries or geographical areas, as well as those locally originated Malaysian manufacturers.

The population in this study comprises manufacturers listed in the 2008 Federation of Malaysian Manufacturers (FMM) Directory. The FMM Directory was chosen because of its extensive listing of manufacturers in Malaysia and because it "has carved a brand presence of its own as a premier and comprehensive trade publication" (FMM, 2008). For this particular study, 1000 manufacturers were randomly selected from the FMM Directory 2008 (the sampling frame) to be the effective unit of analysis, as this approach was considered to be convenient, offered unrestricted choice, had the least bias and offered the greatest generalisability (Sekaran, 2005). As for the simple random sampling procedure, its choice was considered justified as this sampling method has previously been used in other empirical studies, in particular those studying manufacturers (Morgan et al., 2004; Jusoh & Parnell, 2008; Jusoh, Ibrahim, & Zainuddin, 2008). In short, given the financial and time constraints faced by the researcher in conducting this study, the choice of the sampling frame and the simple random sampling procedure can be justified. In the survey, 127 respondents completed the questionnaire (12.7% response rate). The Cronbach's alpha coefficients for the variables based on the survey registered values well above the minimum required alpha coefficient value of 0.70 (competitive advantage = 0.86 and performance = 0.93). This result reflects the reliability and internal consistency of the research instrument's scale of measurement. Exploratory data analyses were initially conducted to ensure that there were no violations of the assumptions of normality, linearity and homogeneity of variance, which are amongst the conditions needed to engage in multivariate data analysis.

RESULTS AND DISCUSSIONS

A two-way between-groups ANOVA was performed to examine the moderating effects of the age and size of firms in the relationship between competitive advantage and performance.

Moderating Effect of the Age of Firms

In the two-way ANOVA conducted to explore the impact of the firm age and competitive advantage on levels of perceived performance, subjects were divided into two categories according to their competitive advantage mean score (Medium: 2.34 to 3.67; High: 3.68 to 5.00). Firms were divided into two groups based on age (New: 15 years and below; Old: 16 years and above). The interaction effect between age and competitive advantage category was statistically significant, $F(1, 123) = 4.21$, $p = 0.04$, but there was a small effect size (partial eta squared = 0.03) based on the guidelines proposed by Cohen (1988) for interpreting the eta squared value (0.01 = small effect, 0.06 = moderate effect, 0.14 = large effect).

There was a statistically significant main effect for the competitive advantage category, $F(1, 123) = 19.65$, $p = 0.0001$, and a large effect size (partial eta squared = 0.14) was observed. However, the main effect for the age category, $F(1, 123) = 3.43$, $p = 0.07$, did not reach statistical significance (New: n = 35; Old: n = 92). Levene's test showed a non-significant result, $F(3, 123) = 0.23$, $p = 0.88$, implying that the equality of error variances assumption was not violated. Table 1 illustrates these results.

The findings of the two-way ANOVA above indicate that the interaction effect between age and competitive advantage category is statistically significant, $F(1, 123) = 4.21$, $p = 0.04$. The R-squared value reported is 0.263, implying that the total variance in performance explained by the model as a whole is 26.3%. This result supports hypothesis 1; namely, the relationship between competitive advantage and performance is moderated by the age of the firms. An inspection of the graph in Appendix A which illustrates the Competitive Advantage-Performance relationship separately for each group, shows more clearly that the relationship is stronger (i.e. there is a steeper slope) for the old firms compared to the new firms.

Table 1
Tests of between-subject effects (age of firms)

Dependent Variable: Performance						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	10.357[a]	3	3.452	14.616	.000	.263
Intercept	1261.706	1	1261.706	5341.423	.000	.977
Agecat	.809	1	.809	3.426	.067	.027
OrgnCAdv	4.642	1	4.642	19.650	.000	.138
Agecat* OrgnCAdv	.994	1	.994	4.207	.042	.033
Error	29.054	123	.236			
Total	1657.426	127				
Corrected Total	39.411	126				

Note: a. R Squared = .263 (Adjusted R Squared = .245)

Previous studies have shown that the age of firms plays a significant moderating role in the relationship between competitive advantage and performance (Ketokivi & Schroeder, 2004; Morgan et al., 2004; Ainuddin et al., 2007). Ketokivi and Schroeder, (2004); Morgan et al., (2004) and Ainuddin et al., (2007) reported a significant moderating role of the age of firms in the relationship between competitive advantage and performance, when the age of firms was conceptualised in terms of "new and old plants" (Ketokivi & Schroeder, 2004), "the number of years firm has been engaged in exporting operations" [sic] (Morgan et al., 2004) and "the age of IJV formation" (Ainuddin et al., 2007).

The results of this study lend empirical support to previous findings that the age of firms moderates the relationship between competitive advantage and performance. At the medium level of competitive advantage, new firms demonstrate a higher mean score for performance (M = 3.33) relative to old firms (M = 3.31). However, at the high level of competitive advantage, old firms demonstrate a higher mean score for performance (M = 3.94) relative to new firms (M = 3.56). With an eta squared value of 0.033, the interaction effect between competitive advantage and age is able to explain 3.3% of the variance in performance, reflecting a small effect size (Cohen, 1988). This results in a statistically significant moderating effect, $F(1, 123) = 4.21$, $p = 0.04$.

This finding indicates that as firms grow older, their experience enables them to perform better than before, according to their own perceptions. In other words, with age, more effective and efficient manufacturing capabilities and processes may be translated into higher returns on investments, resulting in higher performance.

Moderating Effect of the Size of Firms

In the two-way ANOVA conducted to explore the impact of the size of firms and competitive advantage on levels of perceived performance, subjects are divided into two groups according to their competitive advantage mean score category (Medium: 2.34 to 3.67; High: 3.68 to 5.00). The size of firms was divided into two levels (Small and medium: 150 employees and below; Large: 151 employees and above). The interaction effect between size and competitive advantage category was not statistically significant, $F (1, 123) = 0.824$, $p = 0.366$.

There was, however, a statistically significant main effect for the competitive advantage category, $F (1, 123) = 30.121$, $p = 0.0001$, and a large effect size (partial eta squared = 0.20) was found. Furthermore, the main effect for size category, $F (1, 123) = 7.224$, $p = 0.008$, also reached statistical significance (Small and medium: $N = 64$; Large: $N = 63$). Levene's test reported a non-significant result, $F (3, 123) = 1.27$, $p = 0.288$, implying that the equality of error variances assumption was not violated. Table 2 illustrates the results.

Table 2
Tests of between-subject effects (the size of firms)

Dependent Variable: Performance						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	10.517[a]	3	3.506	14.924	.000	.267
Intercept	1565.348	1	1565.348	6663.568	.000	.982
Sizecat	1.697	1	1.697	7.224	.008	.055
OrgnCAdv	7.076	1	7.076	30.121	.000	.197
Sizecat * OrgnCAdv	.194	1	.194	.824	.366	.007
Error	28.894	123	.235			
Total	1657.426	127				
Corrected Total	39.411	126				

Note: a. *R* Squared = .267 (Adjusted *R* Squared = .249)

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The findings from the two-way ANOVA above indicate that the interaction effect between size and competitive advantage category was not statistically significant, $F (1, 123) = 0.824$, $p = 0.366$. This result does not support hypothesis 2, which suggests the relationship between competitive advantage and performance is not moderated by the size of firms. However, further scrutiny of the graph in Appendix B demonstrating the Competitive Advantage-Performance relationship for each group individually shows more clearly that the relationship between size and performance is relatively stronger (i.e., steeper slope) for the large firms compared to the small and medium firms.

Empirically, there have been mixed results for the effect of the size of firms on the relationship competitive advantage and performance. Some studies have shown that the size of firms plays a significant moderating role in the relationship between competitive advantage and performance (Ketokivi & Schroeder, 2004; Morgan et al., 2004). Nonetheless, another study reports that the size of firms do not have a significant moderating effect in the relationship between competitive advantage and performance (Ainuddin et al., 2007).

Ketokivi and Schroeder (2004) and Morgan et al. (2004) report a significant moderating role of the size of firms in the relationship between competitive advantage and performance, when the size of firms was conceptualised in terms of "the number of employees" (Ketokivi & Schroeder, 2004) and "the number of full-time employees" (Morgan et al., 2004). The size of firms has also been conceptualised in terms of "the number of employees in the IJV formation" (Ainuddin et al., 2007).

The results of the present study do provide some empirical support to previous findings that the size of firms does not moderate the relationship between competitive advantage and performance (Ainuddin et al., 2007). However, the present study differs from past reports of a significant moderating effect for the size of firms (Ketokivi & Schroeder, 2004; Morgan et al., 2004). At the medium level of competitive advantage, small and medium firms reported a lower mean score for performance ($M = 3.25$) relative to large firms ($M = 3.41$), and at the high level of competitive advantage, large firms reported a higher mean score for performance ($M = 3.97$) relative to small and medium firms ($M = 3.66$). With an eta squared value of 0.007, the interaction effect between competitive advantage and the size of firms is able to explain only 0.7% of the variance in performance, suggesting a small effect size (Cohen, 1988). This moderating effect was not statistically significant, $F (1, 123) = 0.824$, $p = 0.366$.

The results of this study suggest that the size of firms does not have any significant moderating effect in the relationship between competitive advantage and performance. In other words, with regard to their level of competitive

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advantage, firms' self-perceived performance will not significantly differ with respect to their size.

CONCLUSION AND IMPLICATIONS

Previous studies have illustrated that there is a significant relationship between competitive advantage and performance. In other words, competitive advantage is regarded as part of the foundation for high level performance. This relationship will probably be affected by variables such as the age and size of firms. By examining the relative moderating effects of these variables, this study provides valuable information to firms, regarding strategic management for the attainment of competitive advantage and the improvement of performance. Both theoretically and empirically, only the age of firms is a significant moderator in the relationship between competitive advantage and performance. This finding can be explained by the simple fact that experience comes with age, and organisations that have established such experience will be better able to improve their overall performance, given a relatively equal competitive advantage level. Because the moderating effect of the age of firms is stronger for older firms, the government might consider possible policy interventions such as fiscal measures, tax incentives or financial initiatives to equalise the perceived competitive advantage between older and newer firms. In addition, the newer firms have to benchmark themselves against the old firms in order to improve their relative competitive advantage level and also establish a more stable organisational culture and hierarchy. This benchmarking would ensure that the newer firms would not be left behind in terms of their organisational performance. We found that the size of the firms does not significantly moderate the relationship between competitive advantage and performance. One possible explanation for this finding is that in the present era of rapid technological and information system advancement, resource and product outsourcing, and globalisation, the size of firms will have little bearing on the relationship between the competitive advantage and performance of organisations. In other words, regardless of the size of firms, the relationship between competitive advantage and performance will not be significantly affected. Nonetheless, the results of this study did illustrate that in regard to the size of firms, this relationship is relatively stronger (i.e. steeper slope) for the larger firms. This finding gives a signal for further manufacturing policy enhancement and infrastructure support from both the government and the private sector. This approach would encourage firms not only to increase their scale of operations but also to improve their production efficiency in order to compete internationally and improve their relative competitive advantage. Despite our finding that the moderating effect of the size of firms was not statistically significant, overall, this study provides empirical

support for the RBV of Malaysian manufacturers regarding the issue of competitive advantage.

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APPENDIX A

Estimated Marginal Means of Performance (Age of Firms)

Estimated Marginal Means of Performance
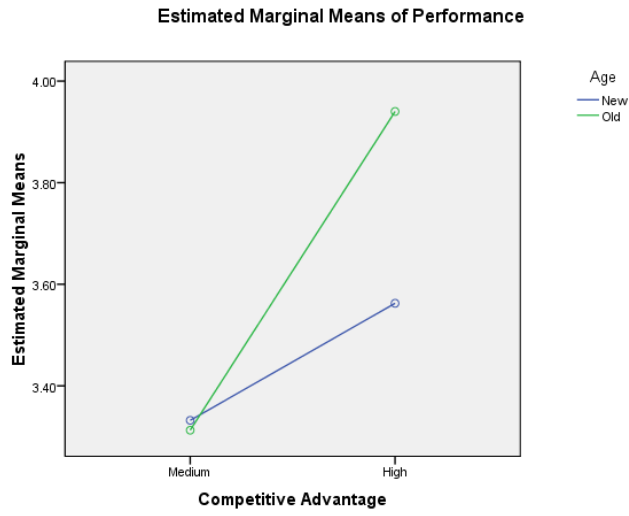
APPENDIX B

Estimated Marginal Means of Performance (The Size of Firms)

Estimated Marginal Means of Performance