

Exploring the Relationship of Supplier-Manufacturer with Sourcing Project Success in-terms of Strategic Performance

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Abstract

The purpose of the current study was to investigate the relationship between relational-oriented exchange and outsourcing success of supplier-manufacturer relationship within Malaysia. This study used the partial least squares (PLS) and structural equation modeling (SEM) tool to test the hypotheses. The data was gathered from a postal survey of 865 electrical & electronics sub-sector, of which 216 respondents participated in this study. The result indicated that relational-oriented exchange was positively related to the outsourcing success. Implications of the findings are further elaborated.

Keywords: Relational-Oriented Exchange, Supplier-Manufacturer Relationship, Outsourcing Success, Partial Least Squares, Malaysia

1. Introduction

The focus of this research is on the relationship of strategic, outsourcing success, and the performance of the relationship. A questionnaire survey is used to identify how suppliers deal with manufacturers. Data is collected by a postal survey from

the electrical and electronics sub-sector (E&E). Therefore, the main goal of the study is identified as: to determine the positive relationship between supplier-manufacturer relationship with the sourcing project success in terms of strategic performance.

Evidence suggests that firm performance is affected by its abilities to integrate, build, and reconfigure resources. This process is referred to as dynamic capabilities [1]. In particular, dynamic capabilities have been used to explain why firms in the same industry perform differently. For example, [2] suggest that dynamic capabilities are embedded within firms and consist as a set of specific and identifiable strategic and organizational routines. [3] found that firms with a dedicated capability to manage inter firm relationships generated substantially higher market value than firms without such capability. Stated differently, companies that systematically invest in developing the ability to manage supplier-manufacturer relationship consistently perform better than others that choose not to make such investments. Accordingly, it can be expected that investments in development of relational-oriented exchange will reduce coordination and integration costs, and improve the synergistic

benefits available through outsourcing success.

2. Research Context and Research Model

2.1. Relational-oriented exchange

In this study, relational exchange refers to durable relationships in terms of principles and norms which govern the behavior of two parties. Following previous scholars [4];[5], this study defines relational-oriented exchange as “the extent of long-term supplier-manufacturer relationship of electrical and electronic industry that are managed primarily by relational norms and ethical principles”. The norms and principles are as means of relationship control and coordination. The definition differs from other types of relationships like vertical integration, power hegemony or a market relationship. This is because of the co-existence of understood continuity agreements, cooperation norms and action procedures.

H1: Relational-oriented exchange has a significant positive impact on outsourcing success

2.2. Outsourcing Success

Outsourcing should have a specific goal as an objective with a measurable outcome. Successful outsourcing refers to what implementation factors the company undertakes in order to achieve its objectives, goals and expectations [6]. Organizations would be asked to identify their most specific goals or projected benefits to indicate improvement achieved as a result of the out-sourcing effect. The present research choices include: financial performance and strategic performance of outsourcing efforts, which were suggested by several authors [7];[8]. Traditionally, financial data has been considered as the basis for organizational decision-making for a long time; however, manag-

ers have no idea of the utility of non-financial data for improving decision making [9]. This research will introduce Kaplan and Norton’s balanced scorecard, the mixed method of assessing outsourcing success using both financial and non-financial data. Fig. 1 shows the research model for the study.

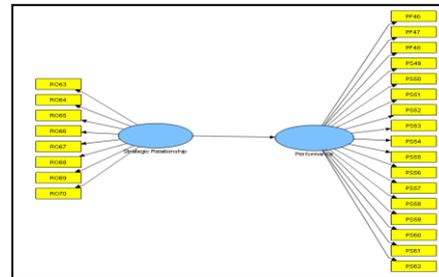


Fig. 1: Research Model

3. Limitation of the Study

This is an empirical study on electrical and electronic manufacturing industries in Malaysia. This context is justified as the electrical and electronics industry is Malaysia’s leading industrial sector, contributing significantly to the country’s manufacturing output, exports and employment. In 2010, gross output of the industry totaled RM197.1 billion (US\$61.6 billion), while the industry’s exports of electrical and electronics products amounted to RM266.3 billion (US\$83.2 billion) or 58.9 % of Malaysia’s manufactured exports and 44% of Malaysia’s total exports [10]. Furthermore, [11] reported that the manufacturing sector created 3.3 million employment opportunities. There is a strong possibility that understanding of electrical and electronic industry provides outsourcing arrangement insights of total of 50-60% of total manufacturing industries in Malaysia. From there on, industrial practitioners should be able to benefit a viable framework to work on respective

organizations. In addition, most outsourcing management studies conceptualized theoretical framework and begin with single industry on data collection before concluding and expanding the model to other sub-industries [12]. The study covers the Malaysian electrical and electronic manufacturers listed on the (FMM, 2010) directory where the respondents targeted are supply chain, planning and procurement managers to provide information. This scope provides insights of the outsourcing management.

4. Research Method

A survey method is commonly used in majority of empirical studies. [13] explained that survey method encompasses broader population study on larger sample size. It is relatively easy to be administered and incurs moderate cost. Internet survey, phone interview, e-mail survey and postal survey have been considered to be employed to the targeted respondents in this study. Given such advantage, researcher can study more variables. Survey findings can be statistically tested to generalize real world environment. The disadvantages of a survey include the potential lack of response from respondents; instruments for testing variables are largely based on perception; and only cross sectional studies can be conducted at one point in time. Based on the advantage and disadvantage analysis, the survey method was used in this study in the researchers' attempt to understand a broad population of Malaysia's electrical and electronic industries.

4.1. Data collection

A total postal survey is sent out to 865 respondents in two waves during the months of September to November 2011 and from December 2011 to January 2012. A total of 218 are received and used to analysis which translates to about

25.2% response rate. The first wave yields 147 responses and the second wave yields 71 responses.

4.2. Measures and assessment of goodness of measures

Overall the questionnaire has been categorized into three sections: general information about the organization, the relational orientation of the exchange in that it enhances the relational orientation by supplier, and respondent's profile. A questionnaire using a seven-point Likert scale is used to gather data for each construct of the research model. All instruments are adapted from previous literatures and are modified to measure the performance. Questionnaires are designed based on a multiple item measurement scale adapted from previous research namely [14, 15]; [16, 17].

4.3. Goodness of measure

Validity and reliability are the two main criteria used for testing goodness of measures. Validity is a test of how well a developed instrument measures the particular concept it is intended to measure while reliability is a test of how consistently a measuring instrument measures whatever concept it is measuring.

4.4. Measurement Model

First we tested for convergent validity which is the degree to which multiple items used to measure the same concept are in agreement. This was assessed through factor loadings, composite reliability and average variance extracted [18].

As seen in Table 1, all item loadings exceed the recommended value of 0.6 [19]. Composite reliability (CR) values, which depict the degree to which the construct indicators indicate the latent construct, exceed the recommended value of 0.7 [18] while average variance extracted (AVE) which reflects the overall amount

of variance in the indicators accounted for by the latent construct, exceed the recommended value of 0.5 [18].

Table 1: Measurement Model: Convergent Validity

Construct	Item	Loading	AVE ^a	CR ^b
Outsourcing Success	PF47	0.701	0.752	0.980
	PF48	0.705		
	PS49	0.816		
	PS50	0.872		
	PS51	0.857		
	PS52	0.895		
	PS53	0.921		
	PS54	0.907		
	PS55	0.925		
	PS56	0.928		
	PS57	0.925		
	PS58	0.918		
	PS59	0.853		
	PS60	0.850		
PS61	0.873			
PS62	0.884			

(Table 1 continued)

Construct	Item	Loading	AVE ^a	CR ^b
Relational-Oriented Exchange	RO63	0.936	0.842	0.977
	RO64	0.910		
	RO65	0.901		
	RO66	0.938		
	RO67	0.934		
	RO68	0.921		
	RO69	0.905		
	RO70	0.896		

^aAverage Variance Extracted (AVE) = (summation of the square of the factor loadings)/{(summation of the square of the factor loadings) + (summation of the error variances)}

^b Composite Reliability (CR) = (square of the summation of the factor loadings)/{(square of the summation of the factor loadings) + (square of the summation of the error variances)}

Next we proceeded to test for discriminant validity - the extent to which the

measures are not a reflection of some other variables and it is indicated by the low correlations between the measure of interest and the measures of other constructs [20]. As shown in Table 2, the correlations for each construct is less than the square root of the AVE by the indicators measuring that construct indicating adequate discriminant validity [21]. In total, the measurement model demonstrates adequate convergent validity and discriminant validity.

Table 2: Measurement Model: Discriminant Validity

	Outsourcing Success	ROE
Outsourcing Success	0.867	
ROE	0.618	0.918

Diagonals (in bold) represent the square root of the AVE while the other entries represent the correlations.

4.5. Structural model

Table 3: Path Coefficients and Hypothesis Testing

Hypothesis	
H1	ROE -> Outsourcing Success

Beta	Std. Error	t-value	Decision
0.618	0.050	12.311	Supported

Following the assessment of the measurement model, the hypothesized relationships in the structural model are tested. The results of the analysis are depicted in Fig. 2. The results indicate that ROE ($\beta = 0.618$, $p < 0.05$) are positively related to Outsourcing Success, explaining 38.2% of the variance present in Outsourcing Success which is ROE as important variable in predicting the outsourcing success. Table 3 shows the results provide sufficient

evidence to support the hypotheses H1 tested in this study.

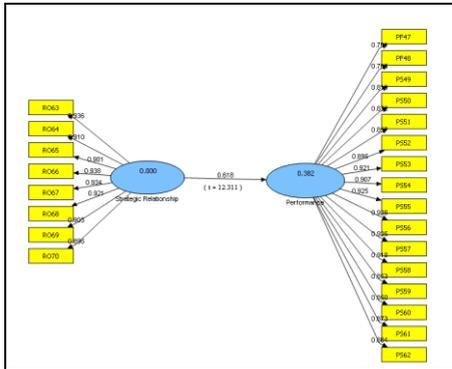


Fig. 2: Results of the PLS analysis

5. Discussion and Conclusion

This study contributes to the identification of supplier-manufacturer relationship dimension on whether that relationship impacts upon organizations' outsourcing success. The dimensions include process and structure. Specifically, first, this study suggests that improvement in the supplier revenue may be achieved through relationship quality between supplier and manufacturer. Second, the improvement in the strategic perspective or internal process outsourcing success may be achieved through relationship quality between supplier-manufacturer. These findings would help managers to develop effective strategies or practices and decide the appropriate level of investment in outsourcing management.

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