

Linking Contractor-Supplier Commitment in the Relationship of Customer Orientation, Channel Member and Company Performance in the Construction Industry

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Abstract— Construction is one of the industries that contribute to the Malaysian economy. Nevertheless, the Malaysian construction industry needs to continuously enhance its value chain efficiency and effectiveness to be a total solution provider in the globalised environment. The purpose of this paper is to establish a link between customer orientation, contractor supplier relationship and company performance. To allow for greater understanding in the field of supply chain management, this study observed into the relationship between the construction companies and their main building materials suppliers. This study employed the quantitative method where stratified random sampling and 235 self-administrated questionnaires were sent to respondents in the construction industry. The cronbach alpha for each dimension namely customer orientation, channel member relationship and company performance are 0.772, 0.616 and 0.838 respectively. The results revealed that customer orientation have positive and significant effects on contractor supplier relationship. It was also found that contractor supplier relationship has significant positive relationship towards company performance. This study focused solely on the companies in the construction industry and data collection was on a single respondent basis. The findings of this study underline some implication and suggests that construction industry players adopt and emphasise such orientations in order to enhance their performance – operational and customer performance in particular. Future study may explore other industry and how it influenced channel members commitment to enhance company performance.

Keywords - *Malaysia, Construction Industry, Supply Chain Management, Channel Member Relationship, Company Performance*

1. Introduction

One of the construction industry's uniqueness and also major challenge is in managing a network of independent business partners to ensure that projects are delivered as promised. In short, channel member relationship and

contractor supplier commitment are vital ingredients towards long term survival.

Customer orientation, one of the features in market orientation, has its root from the marketing concept [14]; [16]. So important is this feature, that it has been considered the fundamental component of marketing for decades [2], with customer orientation serving as the foundation for the marketing concept and market orientation [10]. A company is uniquely positioned to shine due to the closeness between the management and the customer [18]. Thus, customer orientation is a valuable resource or capability for a company to distinguish themselves from other companies [1], [19].

Due to the interdependency and diversity of channel partners involved in the final service delivery, the capability of a firm to engage its channel members in a meaningful relationship provides another competitive advantage. Supply Chain Management (SCM) generally has been defined as coordinating various channel members in one network of interdependent suppliers, manufacturers, distribution centres and retailers with aims to increase the flow of goods, services, and information from original suppliers to ultimate customers with the objectives of reducing system-wide costs while fulfilling essential service level [21].

This study, which focuses on ongoing business relationships in the construction industry, is rooted in the theoretical perspectives claiming that long-term business relationships benefit the channel member relationship involved in the business relationship.

2. Method

In this study, all of the constructs were measured at the company level. There were arguments that supply chain relationship in the construction industry can take place at the project as well as the company level [5], [20] and [17] the current study had taken into account the firm perspective. This understanding has been based on the

present study which focused on the channel member relationship and their commitment towards the construction activities.

Hence, in designing the measurement instrument, all questions were directed towards the company's activities and performance rather than at the specific project level. Likewise, the target respondents were instructed to concentrate on the company's activities as the unit of analysis. The present study, which focuses on the channel member relationship of the company (G7 contractors) activities and performance as unit analysis emerged to be a suitable choice. The establishment of the size for the survey population, databases from the Construction Industry Development Board (CIDB) Malaysia was consulted (CIDB-Local Contractors, 2009). For instance, of data collection, a survey questionnaire method was used.

CIDB have also categorised the contractors that have registered with them by grade from G1 to G7 based on the contractor's tendering capacity and paid-up capital. Table 1 shows the contractors' grades of registration set by the CIDB. In this study, the decision to choose G7 as target respondents was partly due to the nature of relationship with their suppliers. Larger organisations (contractors) were found to be more of structural bonding (business-like approach) in their conduct when dealing with their suppliers apart from social bonding [17].

Table 1. Grades of Enrolment of Contractors by CIDB Based on Paid Up Capital and Tendering Capacity

Contractor Grades of Registration	Tendering Capacity (RM)	Paid-up Capital	Size of Organisa-tion
G7	No Limit	RM 750,000 (£150,000)	Large
G6	Not exceeding 10 million	RM 500,000 (£100,000)	
G5	Not exceeding 5 million	RM 250,000 (£50,000)	Medium
G4	Not exceeding 3 million	RM 150,000 (£30,000)	
G3	Not exceeding 1 million	RM 50,000 (£10,000)	Small
G2	Not exceeding 500,000	RM 25,000 (£5,000)	
G1	Not exceeding 200,000	RM 5,000 (£1,000)	

Source: CIDB Malaysia

The study adapted scales from well-established literature and previous study as a basis of questions for the survey. The questionnaire used in this study came from several studies. It was a combination of adopted questions of previous literature and new questions that were developed based on the literature and suggestions from

academicians and practitioners. A majority of the questions were close-ended for the 7-point likert scale which was used to determine the agreement to a particular question. All measurements were adopted and adapted from [14] for Customer Orientation scale; [11] for Contractor-Supplier Commitment scale and from [4] for Company Performance scale. The used of 7-point likert scale as the scale for present study were supported by several researchers in which this likert scale was seen to improve the scale reliability without scarifying its psychometric properties.

The questionnaire used comprised five sections. Section A measured the commitment between major contractors of building i.e. standard materials. These variables were measured using 5 items. Samples of items were used to investigate the level of agreement for commitment among the contractor and supplier. Section B measured the relationship between the customer i.e. Customer Orientation (Intelligence of Generation, IOG; Intelligence of Dissemination, IOD and Company-wide Responsiveness, CWR). These variables were measured using 12 items. Samples of items were used to investigate the customer orientation component in their relationship. Section C measured the channel member relationship with the contractor or major suppliers of building i.e. standard materials. Channel member relationship consist of Commitment (CMT), Trust (TRT) and Cooperation (COO) was measured using 16 items. Sample items included the contractor or supplier relationship in terms of trust, commitment and cooperation among them. Section D measured the level of company performance. Company Performance was measured using 10 items. Sample items included the financial, customer performance and the internal business process in the company. Meanwhile, Demographic Profile section aimed to collect the respondents' demographic profiles. 235 respondents participated in this study. The results of the previous pilot study from 30 respondents revealed that the coefficient value of all studied variables was above 0.7, indicating a good level in terms of reliability.

The research model for this study is tested using partial least squares (PLS 3.0). This statistical program assesses the psychometric properties of the measurement model and estimates the parameters of the structural model. The validity and reliability of the measurement model for this study is examined using the following analyses: internal consistency reliability, convergent validity and discriminant validity.

This study used the Smart PLS 3.0 software to analyze the research model. First, the measurement model tested followed by evaluation of the structural model. To test the significance of the path coefficients and the loadings, a bootstrapping (5000 resamples) was used [9].

First, a confirmatory factor analysis was conducted to test the reliability and validity of the measures. To assess the reliability of the reflective constructs, the composite reliabilities and average variance extracted were computed [6].

Prior to evaluating the structural model, it is crucial to ensure that there is no lateral collinearity issue in the structural model. The outcome of lateral collinearity test shown that all the Inner VIF values for other independent variables that need to be examined for lateral multicollinearity are less than 5, indicating lateral multicollinearity is not concern in this study [9].

In this study, 13 hypotheses are developed between the constructs. In order to test the significance level, t-statistics for all paths are generated using Smart PLS3.0 bootstrapping function. Based on the assessment of the path coefficient as shown in Table 5, 7 relationships are supported and 6 are not supported. All 7 relationships are found to have t-value ≥ 1.645 , thus significant at 0.05 level of significant. Specifically, all 7 supported relationships explains the 55% and 36% of variance in company performance. The R² value of 0.550 and 0.359 is above the 0.26 value as suggested by [3] which indicates a substantial model.

Next the effect sizes (f²) are assessed. The p-value used is to inform either the effect exists, the p-value will not reveal the effect. This study reported both the substantive significant (effect size) and statistical significance (p-value). According to Hair, Hult, Ringle, and Sarstedt [9] stated that the change in the R² value should also be examined and reported. By evaluating this report, we can examine R² change by evaluating whether the omitted exogenous construct has a substantive impact on the endogenous construct. In measuring the effect size, this study used [3] as a guideline i.e. the values of 0.02 is small, 0.15 is medium and 0.35 is large effect. From Table 5, it can be observed that all of the values of q² are small in producing the R² but the structural model has predictive relevance as all of the Q² values are > 0 as stated [9]. The Q² i.e. the predictive relevance of the model is examined using the blindfolding procedure. All the two Q² values for Commitment (COM) are 0.205 and Company Performance (CP) is 0.550 are more than 0 indicating that the model has sufficient predictive relevance.

4. Conclusion

By developing customer orientation, channel member relationship and contractor supplier commitment to each other's needs and improving communication and co-operation, a stronger relationship should emerge which ultimately will create a closer bonding between supplier and contractor. This is itself could be self-perpetuating, because if stronger relationships ultimately improve customer satisfaction, it is also probable that the effect will be reciprocated.

The study results were derived from companies representing the Malaysian construction industry and generalisations beyond this population cannot be made. Future research could collect data from other geographical regions, e.g. US, Europe, Australia and South America to see if the findings are replicated and to explore the influence of national culture on any variations in performance (which was outside the scope of this study).

Table 5. Hypothesis Testing

Hypo thesis	Std Beta	Std. Error	t-value	P Values	R2	f ²	Q ²	q ²
H1	0.188	0.065	2.863	0.002*	0.359	0.039	0.205	0.016
H2	0.021	0.014	1.553	0.060**	0.550	0.170	0.304	
H3	0.114	0.059	1.924	0.027*		0.018		
H4	0.123	0.075	1.640	0.051*		0.013		0.003
H5	0.014	0.012	1.171	0.121**		0.168		
H6	0.233	0.086	2.706	0.004*		0.040		0.018
H7	0.027	0.018	1.481	0.070**		0.003		
H8	-0.155	0.089	1.751	0.040*		0.018		0.006
H9	-0.018	0.015	1.189	0.117**		0.002		
H10	0.343	0.082	4.197	0.000*		0.077		0.035
H11	0.039	0.024	1.600	0.055*		0.007		
H12	-0.045	0.070	0.650	0.258*		0.002		0.001-
H13	-0.005	0.010	0.536	0.296**		0.000		

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