

# The Impact of Supply Chain Social Capital on Market Orientation: The Buyer Perspective

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**Abstract**— Developing strength of social ties between buying and supplying organizations is increasingly cited as a critical differentiator of high and low performers in educational supply chains. While the creation of relational capital within an organization is a relatively well identified concept in organizational research, comparatively little research exists on the bonding and bridging social ties that create relational value in educational supply chains. In our research, we extend theoretical models of group social conduits into this context, and develop a model that posits the impact of social capital on the reactive and proactive market orientation. Results from our study of 114 university spin-off companies in Malaysia suggest that formal social capital are important in the creation of relational capital, which in turn can lead to improve market orientation eventually supplier relationship outcomes. Formal bridging social capital conduits appear to play a lesser role in deriving these benefits in educational supply chain management context.

**Keywords**— *Social Capital, Market Orientation, Educational Supply Chain Management, PLS-SEM*

## 1. Introduction

Organizational resources in supply chain management (SCM) have contributed to superior firm performance [1],[2] especially in educational research development [3]. The integration of material, information and financial provides sustainable supply chain framework to provide universities' competitive advantage over competitors. In SCM, organizations put high invest in infrastructures and technologies to distribute information on inventories level and production. On the buyer side, the extensive shared information from different entities maximizes opportunity into cost-effective. However, relevance information from and to buyers can be vary, depending to the level of social capital [4]. The distribution of homogenous knowledge triggered the learning process within organization that perceived the information as immobile resources in long-term competitive advantage through market intelligence, distribution channels strategy for market

orientation [5].

Market orientation creates the cultural foundation that enables organization to reflects the understanding customers' preferences and forecasting future demand that yields greater returns than a disaggregate approach [6]. The art of practicing the learning organization is the only way that encourages the firms to develop a good relationship with customers. Hence, a proper learning and understanding of consumers' need and identification of market is required to discover the product value.

Learning culture and relational capital have their origins in organizational strategy. Organizations are unable to identify business opportunity without acquiring sufficient market information to achieve firm's competitiveness [7]. Given the pivotal strategic role of the marketing manager in developing working relationships and effective communication, we believe there is a need to more formally research the approaches used in establishing and managing the social ties relationship with customers and suppliers.

Our research explores the bridging and bonding of social ties in supply chain relationship as relevant to emerging market businesses for value creation and competitive advantage. We argue that through the weak tie, actors gain direct access of information and opportunities. In this research, we posit that since individual has different nature of social capital, the success of information exchange depends on type of networks i.e. strategic alliance. These relations are based on homogeneity of interest or knowledge leading to formation of social membership group engaging the mutual recognition, thus creates value to expect returns in the market.

The connections encourage frequent communication especially in providing information which may rooted by emotional or commitment attachment. Previous studies gave attention to relational capital for most two decades [8]. However, the notion of establishing the relationship between different social ties mechanisms within the context of supplier relationships remains untested. We apply a set of theoretical frameworks from group theory and social capital research to frame our theoretical model and discussions.

## 2. Literature Review on Social Capital and Market Orientation

Social capital theory posits that interactions to other groups provide access to strategic resources [9],[10]. The mutual linkage also exposes the organization to high-quality information about products, marketing, and technological opportunities. This information benefit could be in the form of access to valuable information on available opportunities through referrals and reputational endorsements. The focus on external relations in bridging social capital mobilizing their network connection helps to access information [11]. These benefits are especially important in young companies because of the high level of uncertainty due to the limited market-related knowledge at early growth in facilitating economic exchange and access to information, resources and knowledge. Uncertainty avoidance by organizations become crucial as it reflects the tendency to seek stability and predictability. Managers in organization that rank low on uncertainty avoidance, compared with those in countries that rank high, should be more effective and productive in the less-formalized structures that are associated with market-oriented organizations.

Although social capital have already been proven useful for tapping market information, studies that investigate direct relationship are still scarce. In particular, previous studies have predominantly focused the effect of social capital on individual level such as entrepreneurial orientation [12], which negates the importance of outcome in organizational spectrum. To address this gap, this study investigates the relationship between the social capital accumulated among network members and market orientation to retrieve information and forecasting supply demand. The choice to adopt a social capital perspective on market orientation was driven by the very essence of both social connections and market orientation in strategic management study.

In examining the consequences of social capital on market orientation, this study identifies two distinct themes. First, social capital increases the efficiency of action. For example, networks of social relations, particularly those characterized by weak ties or structural holes increase the efficiency of information diffusion through minimizing redundancy. As a sequence, it increase the level of understanding of buyers and suppliers to create competitive advantage. Stronger external network utilization through social capital provides an avenue for smaller firms to compete against larger ones with more market power. This indicates the importance of external networks as market information acquisition to importing ideas, insights, and perspectives, not simply data or un-interpreted information collected by the firm through routine information processing activities [13].

Secondly, researchers have found social capital to encourage cooperative behaviour, thereby facilitating the development of new forms of association and

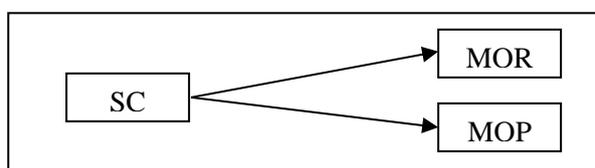
innovative organization [14]. As organizations in emerging markets begin to compete with one another and foreign firms because of the liberalization of their economies, their success depends upon their ability to formulate and implement a coherent competitive strategy. The increment of knowledge sharing and establishment multiple source of channels for market information improved the social ties relationship with buyer enriched proactive market orientation. The social capital is sufficient in providing codified knowledge and should develop with knowledge complexity for radical innovations.

While entering markets in emerging economies may require a different strategic approach, reaching these markets can involve bridging the formal and informal economies. In the informal economy, relationships are grounded primarily on social, not legal, contracts and the organizations with the most expertise in serving these markets; government and civil society have a strong social orientation [15]. Firms design boundaries to protect internal resources and capabilities from unintended spill over and look for partner organizations that wield substantial capability to fill voids in the business environment. Therefore, firms overcome gaps in the business environment through forming alliances, joining networks, using interpersonal ties, or managing firm boundaries. Social connections across network borders through collaborations reduce the hierarchical barrier thus, enhancing information dissemination and use and enabling a more effective implementation of market orientation. Hence, the achievement of interactions across organizational boundaries ends that would be impossible with it or that could be achieved only at extra cost. Indeed, organizations that value and leverage existing social capital have achieved success in these markets. Thus, the hypothesis is developed as below:

Hypothesis 1: Social capital affects the reactive market orientation

Hypothesis 2: Social capital affects the proactive market orientation

Based on the proposed hypothesis, Figure 1 shows the proposed theoretical framework for this study.



**Figure 1: Proposed Theoretical Framework**

Note: SC = Social Capital, MOR = Market Orientation Reactive, MOP = Market Orientation Proactive

## 3. Methodology

A quantitative approach with the combination of the cross-sectional research design was employed. In this study, judgmental sampling was used to reach the whole sample of populations for data collection due to the small population. The criteria for selection of the technology

based spin-off companies is based on the years of establishment; which at least two time-periods of change the as the exclusion criteria.

For this study, the technology based spin-off companies should have been registered for at least three years since 2010. A total of 168 managers were selected as knowledgeable informant represents technology based spin-off companies at each firm was contacted initially by telephone whom agreed to participate. Total of 114 out of 168 completed responses were obtained, yielding a response rate of 79.3%. Incomplete questionnaires were excluded from the data.

On the other hand, the framework was tested using Structural Equation Modeling with Partial Least Square (i.e. PLS-SEM) methodology through the SmartPLS software. This analysis was used in this study due to the primary objective of this research is about to explore the relationship among the targeted variables and also want to testing two dependent variables simultaneously [16], [17]. As for accessing the significant influence of the variables, 5000 replications of samples (i.e. bootstrapping) was used [16],[19] where the analysis of 95% BootstrapBCa Confidence Interval was computed as well as t-statistics.

As for Market Orientation construct, the instrument was assessed through proactive and reactive orientation [20]. The proactive orientation scale consists of eight items, whilst reactive orientation has seven items which overall capture the firm's culture towards relationship with customers. Respondents were asked to assess the degree to which the statements in the market orientation scale described the practices in their firm using a five point Likert scale with anchor labels of "Strongly Disagree" and "Strongly Agree."

Besides that, Social Capital questions was adapted to measure the scope of social capital to the cross-border networks developed by managers in the firm to acquire other resources [21]. The total of ten-item questions was used to measure social capital on a five-point scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) using a five-point Likert scale.

## 4. Analysis and Results

### 4.1 Measurement Model Analysis

Table 1 shows the summary results of the convergent validity assessment for the measurement model based on theoretical framework. All indicators that were used to measure targeted constructs meet the minimum requirement of the loading value above .70 [22] but five indicators were maintain in the analysis since the loadings value were above .60 [16].

**Table 1: Assessment of Convergent Validity and Cross-Loading**

Item	SC	MOR	MOP	AV	CR	CA
SC1	<b>.670*</b>	.316	.455	.51	.89	.86
SC2	<b>.714*</b>	.420	.320			
SC3	<b>.700*</b>	.329	.441			
SC4	<b>.760*</b>	.475	.520			
SC5	<b>.629*</b>	.336	.294			
SC6	<b>.734*</b>	.321	.363			
SC7	<b>.755*</b>	.407	.423			
SC8	<b>.710*</b>	.382	.297			
MOR1	.466	<b>.840*</b>	.497	.59	.91	.88
MOR2	.455	<b>.790*</b>	.535			
MOR3	.337	<b>.680*</b>	.327			
MOR4	.376	<b>.771*</b>	.559			
MOR5	.420	<b>.803*</b>	.537			
MOR6	.441	<b>.762*</b>	.535			
MOR7	.332	<b>.728*</b>	.548			
MOP1	.464	.454	<b>.726*</b>	.55	.91	.88
MOP2	.413	.477	<b>.733*</b>			
MOP3	.378	.518	<b>.762*</b>			
MOP4	.426	.513	<b>.785*</b>			
MOP5	.461	.607	<b>.738*</b>			
MOP6	.327	.378	<b>.690*</b>			
MOP7	.442	.473	<b>.798*</b>			
MOP8	.360	.448	<b>.670*</b>			

Note: Two items were removed due to low loading values (SC9 = .026; SC10 = .178); the bold values reflect the loading values of the respectively items; AV = Average Variance Explained; CR = Composite Reliability; CA = Cronbach's Alpha; SC = Social Capital; MOR = Market orientation reactive; MOP = Market orientation proactive; \*\*p < .05.

However, two items were removed from this analysis one by one since it produced loading values less than .60 (.026 and .178). Besides that, the assessment of Average Variance Explain (i.e. AVE) for each construct was above .50, as well as both reliability tests (i.e. Composite Reliability and Cronbach's Alpha) for each targeted construct were also above .70 [23]. Hence, it meets the validity from the aspects of unidimensionality concept. As for discriminant validity, Table 2 shows the result of HTMT analysis for accessing the discriminant validity of the model. The analysis confirms that, each latent variable was totally discriminate to each other's since all the values of the HTMT were less than 0.9 [23].

**Table 2: HTMT Discriminant Validity Assessment**

Latent Variable	SC	MOR	MOP
SC	-		
MOR	.597	-	
MOP	.624	.741	-

Note: SC = Social Capital; MOR = Market Orientation Reactive; MOP = Market Orientation Proactive

### 4.2 Structural Model Analysis

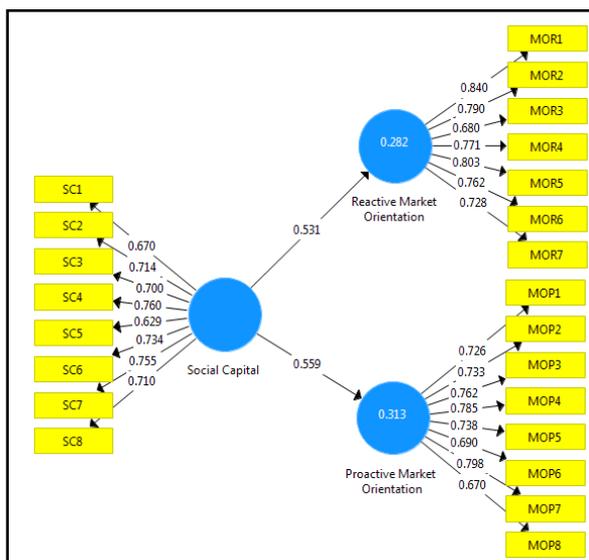
The result of structural analysis (Table 3) indicated that, about 30% ( $R^2 = .313$ ) of variance explained toward market orientation reactive was able explained by social capital, whereas in simultaneously concept, social capital was also able to explained about 28% ( $R^2 = .282$ ) of variance explained toward market orientation proactive. In addition, this independent variable can be considered having a large effect size (.562 and .524) and also having a large predictive relevance (.491 and .463) toward market orientation reactive and market orientation proactive [23].

**Table 3: Path Analysis**

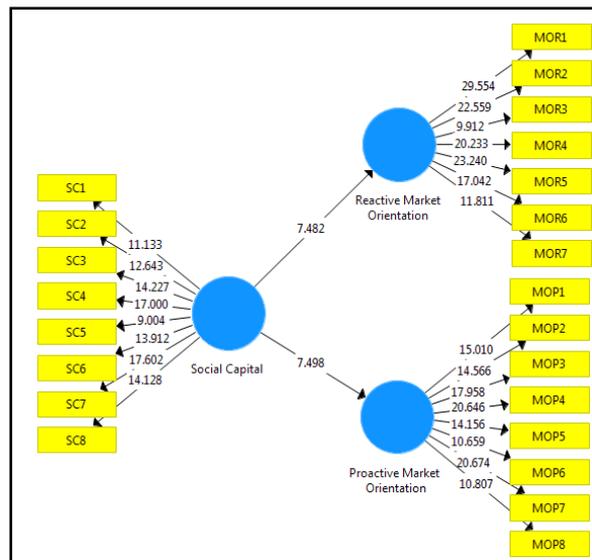
Path	$\beta$	t-value	95% BCa Confidence
SC $\rightarrow$ MOR	0.531	7.482*	(0.362, 0.648)
SC $\rightarrow$ MOP	0.559	7.498*	(0.390, 0.683)

Note: SC = Social Capital; MOR = Market Orientation Reactive; MOP = Market Orientation Proactive;  $\beta$  = Standardized Path Coefficient; \*p <.01.

The structural analysis indicated that, social capital give a positive effect toward market orientation reactive ( $\beta = 0.531$ ,  $t = 7.482$ ,  $p < .01$ ). Besides that, in the same way, this variable was also give significantly affect toward market orientation proactive ( $\beta = 0.559$ ,  $t = 7.498$ ,  $p < .01$ ) with positive effect. Besides that, this analysis of t-statistics also aligns with the analysis of both bootstrapping, where 95% of confidence interval of the analysis was not includes zero value. Therefore, if the average level of social capital was high, then the simultaneous effects of market orientation reactive and market orientation proactive will be high. Figure 2 and Figure 3 shows the assessment of PLS-SEM analysis based on theoretical model.



**Figure 2: PLS-SEM Analysis on Loading, Path Coefficient, and  $R^2$**



**Figure 3: PLS-SEM Analysis on Bootstrapping**

### 5. Discussions

The result also gave the green light on the theoretical perspective which described social capital as an antecedent to market orientation. The extent of formal and informal social ties formed by managers improves the market orientation that provides greater sharing and use of information. The findings on social capital in accessing information supported social capital theory where it believes that social network ties as the pattern of resources and information available to a firm as a result of its location inside a social network structure. Social network ties by managers involve the level of relationship existing between the entrepreneur and local government, as well as the industry molding the firm’s culture with focused orientation to achieve organizational outcomes. In this way, the organization is able to prevent the uncertainty and divergent goals, which inhibits concerted responses to the requirements of the market.

The finding also sat well with previous study that confirmed the significance of the link between the emphasis on supply chain networking relationships and ties with managers of other firms allow the organizations to secure access to information, resources, and knowledge that can help improve performance [24]. Although not defining accessing information directly as market orientation, their description of the purpose of networking relationships with customers and competitors to get information and its ability to contribute to supply chain relationship has led to the assumption that their networking effort with specific purpose was part of the market orientation.

### 6. Conclusions

One remarkable contribution of this research is the evident in the role of managers’ social capital to influence market orientation. From the stance of a social capital, we pay attention to the importance of social relations that was at first highlighted and provides an important implication for sustainable educational supply chain performance

literature. Managers must be able to create an individual social network so that they can transfer existing ideas and skill into knowledge and innovation to survive and grow. In other words, the emphasis on external relations mobilizing their network connection can help one to get the information he or she needs which is more effective and productive in the less-formalized structures in market-oriented organizations.

In addition, the conceptual framework of the present study dismisses the factors that serve as moderator in between social capital and market orientation. Thus, future research should take up a notch with the present model by bringing together several moderating factors such as social competence members construct functions as the moderator between social capital and market orientation. Encompassing these constructs towards market driven would in research assessment and development of these variables may helps to enhance the contribution to the educational supply chain management.

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