THE IMPACT OF STRATEGIC PURCHASING TO THE SUPPLIER INVOLVEMENT THROUGH COMMUNICATION, COORDINATION AND COLLABORATION IN SMAAL AND MEDIUM ENTERPRISES

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ABSTRACT

In recent times, the theory of purchasing and supply operations has been widely studied under a variety of labels and for a number of reasons. Realizing competitive advantage from organizational alignment and relation to materials supply is for a form of backward integration. In the process, the manufacturing organization obeys demands from distributors; purchasing is in turn re-structured and managed to achieve improved customer value for manufacturing; thereafter, the process addresses the suppliers to the organization (external integration) typically involving supplier rationalization and the introduction of supplier evaluation systems. Based on previous research, there was finding that strategic purchasing has been impact to communication, coordination and collaboration with supplier which is increase supplier involvement. According to a survey 100 respondent which was conducted by means questionnaires and 94 completed questionnaires were returned. Six responses were considered incomplete and had to be discarded, and this left 86 valid responses. This study result are strategic purchasing has a positive significant effect to communication is 0.314; positive significant effect to coordination is 0.336; and positive significant effect collaboration is 0.365. Communication and Collaboration directly will bring significant contribution to supplier involvement, but coordination is not directly.

Key words: Strategic purchasing, communication, collaboration, coordination, supplier involvement.

1. INTRODUCTION

Firms do differ. A simple yet powerful description of the term 'management' could be to define the term as a set of actions and strategies that sustain the inter-firm difference. By the same token, information and SMI appear meaningful only when such differences can be sustained. The resource theorist attempts to seek explanations for these differences based on differences in static holding of resources. These are not the only explanations for the uniqueness of a firm. The resource theory defines resources as capital, labor, brand, tacit knowledge, etc., and argues that since managerial decisions are 'rational' and the market is in equilibrium, differences in resources endowment alone can explain inter-firm differences. However, managers are limited in their decision capabilities by prior conditions of resources and by the history of the firm which influence differences.

Resource theory suffers from several shortcomings (Banerjee, 2003). First, information as a resource has to be internal and structural. Second, strategy and inter-firm coordination do not feature in this approach. It may be noted that inter-firm coordination can be sustained only if each firm remains unique. Third, optimality of managerial decisions is strictly limited to markets in equilibrium. Fourthly, 'intermediate good' linking firms and their strategies cannot be defined as a resource according to the definition adopted by the resource theory. As a result of these limitations, flow of personnel which we consider as an 'intermediate good' and markets with rapid change cannot be analyzed by the resource theory.

In the evolutionary theory, information procured from the market is specific to the firm. A firm selects, and procures information based on its earlier history, its internal structure and routine. The strategy of a firm can be adapted from the beginning to both the markets in equilibrium. The strategic management information then makes the firm more efficient, productive and capable of competing and of earning a profit. However and here lies the crucial difference, an evolutionary firm does not consider information as the differentiator between the firms. In other words, evolutionary information is taking to species information. Here information is industry specific. In sharp contrast, we always observe differences amongst firms belonging to the same industry. Evolutionary theory treats these differences as arising out of internal adaptation or innovative capabilities, and out of routines of information usage that this firm has evolved. Evolutionary strategic management information inside an organization is internally fixed and internally evolved. Managerial capability to address the information required is species-specific, but only in its assimilation and in its usage is it individually specific. When purchasing manager wants to buy some of material, they need a specific category and specification material for production.

General purchase purposes, many firms have developed their respective supplier evaluation models to select potential suppliers. Basically, the dimension for vender selection considers the criteria of suppliers' status (ownership structure, turnover, manufacturing capabilities, financial status, etc.), management systems (quality management, environmental management, customer satisfaction, etc.), after-service, R&D, economic analysis, delivery, performance history, communication system, geographical location, and so on (Chen,2005). In this paper we suggest that supplier selection is divided into three step categories: the first stage suppliers with purchasing make a communication, the second stage supplier with purchasing make coordination. As to other requirements, suppliers with purchasing make collaboration.

2. THEORETICAL BACKGROUND

Organizations have for many years strived to improve the efficiency of their internal supply chain activities, e.g., purchasing, manufacturing and logistics. With the globalization of markets combined with a restructuring of many firms, with a focus towards costs, quality, flexibility and technology, a new role for procurement has emerged. Traditionally, purchasing was considered as a clerical function, where the relationships between suppliers and buyers tended to be adversarial (Wu, 2006).

Realizing competitive advantage from organizational alignment and supply chain management in relation to materials supply is a form of backward integration; at "first, it involves the focal enterprise forging alliances of distribution and manufacturing activities to deliver improvements for the final customer (internal integration). In the process, the manufacturing organization obeys demands from distributors; purchasing is in turn re-structured and managed to achieve improved customer value for manufacturing; thereafter, the process addresses the suppliers to the organization (external integration) typically involving supplier rationalization and the introduction of supplier evaluation systems. Evolutionary process develops through: the baseline organization; the functionally integrated company; the internally integrated company; and "finally, the externally integrated company (Akintoye, et al., 2000).

2.1. STRATEGIC PURCHASING

Purchasing was considered to have a passive role in the business organization. In the 1980s, purchasing began to be involved in the corporate strategic planning process. By the 1990s, both academics and managers had given unprecedented attention to strategic purchasing. The ability of purchasing to influence strategic planning has increased in a number of firms due to the rapidly changing competitive environment and evidence reveals that purchasing is increasingly seen as a strategic weapon to establish cooperative supplier relationships to enhance a firm's competitive stance. Thus, contemporary purchasing is now best recognized as a fundamental unit of supply chain management, and the theoretical construct of strategic purchasing is conceptualized by its proactive as well as long-term focus, its contributions to the firm's success, and strategically managed supplier relationships (Chen and Paulraj, 2004).

For variable strategic purchasing in this study use indicator i.e. selection supplier, cost material, quality material and delivery reliability (Jacobs et al., 2009; Hu and Hsu, 2006; Chen and Paulraj, 2004).

2.2. COMMUNICATION

Communication has been defined as a process by which individuals share meaning (individual in purchasing with supplier), it offers the means of creating and implementing behavioral changes both within and without an organization. When dealing with the supplier, the role of the marketing communicator is likely purchasing for the organization includes the facilitation of a sense of shared understanding with supplier about the organization itself, its values, and the identity of its brands and the specific benefits of its material. At the intra-organizational level, however, the communication process has been shown to have a variety of additional roles including (Asif and Sargeant, 2000):

- The creation of a unified corporate identity by improving the insight that individuals purchasing have into the overall philosophy of their organization and its strategic direction.
- Encouraging the motivation and commitment of employees purchasing by ensuring an understanding of the company's objectives and goals.
- Increasing the individual understanding of the process of organizational change as it occurs thereby reducing employee resistance in purchasing
- Reducing the potential for misunderstandings, discrepancies and conflict, within and between external.
- Providing the necessary tools and information to allow employees in purchasing to function adequately in their job roles

Effective inter-organizational communication can be characterized as frequent, genuine, and involving personal contacts between buying and selling personnel. In order to jointly find solutions to material problems and design issues, buyers and suppliers must commit a greater amount of information and be willing to share sensitive design information found that when communication occurs among other functions between the buyer and supplier firms in addition to the purchasing-sales interface, the supplier's quality performance is superior to that experienced when only the buying firm's purchasing department and supplier's sales department act as the inter-firm information conduit. Poor communication was a fundamental weakness in the interface between a buying firm and its supplier, and that this undermines the buying firm's efforts to achieve increased levels of supplier performance (Chen and Paulraj, 2004). To measure variable communication has indicators: communication frequency, sharing information, material standard, and symbioses mutualism.

2.2. COORDINATION

The second step is when the communication intensive between purchasing and supplier are effective and efficient, they will always make communication and it means coordination. Supply chain management has emerged as cross functional, cross company concept to improve coordination of entire value chains through coordinated actions of all companies in the value chain. It regards both internal and external exchange relationships and transaction processes for the coordination and exchange of information and goods or services. Aim is to reduce inefficiencies within and between organizations and inefficiencies in markets. Supply chain management has received a major push from the availability of internet-based information and communication technologies as they bring potentials to improve coordination (Fritz and Hausen, 2007).

Cross-functional coordination in supply chain management can be defined as purposive coordination of supply chain activities and information flows across business functions and between firms. The organization of supply chain requires firms to work together and manage integrated operations both within enterprises and between supply chain partners. Cooperation between supply chain members is influenced by implicit and explicit organizational norms related to particular behavioral guidelines, which give rise to effectiveness of future cooperation. Organizational norms can be described as expectations about behavior or behavioral guidelines based on organizational culture that are at least partially shared by a group of decision makers. Cross-functional coordination in supply chain management can be complex due to the desire of different functional members and supply chain participants to cultivate norms that facilitate active participation in joint activities, information sharing and synthesis of expertise (Eng, 206).

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Managing long-term relationships with customers using cross-functional teams is becoming a common practice in supply chains. Cross-functional teams have been identified as important contributors to the success of such efforts as supplier selection and product design. Cross-functional teams dedicated for strategic purposes have been organized either around the material being purchased or according to the supplier's needs so team members can interact with their supplier counterparts. This construct is operationalized to define the efforts taken to encourage as well as to use such supplier-involved. Indicators for variable coordination are: our supplier is reliable, our supplier is dependable, our suppliers have a high degree of integrity, and our supplier is commitments.

2.3. COLABORATION

The third step is when organization makes communication intensive and a good coordination will be a perfect collaboration. Collaboration and integration with suppliers is a key success supply chain management practice. The results of study demonstrate that the role of supplier quality management in effective QM lies in its direct relationships with product/service design and process management. Successful relationships encourage suppliers to become involved early in the buying firm's design of products/services and to offer suggestions regarding product and/or component simplification. Collaboration with suppliers in new product design is related to higher product quality (Kaynak and Hartley, 2008).

Collaboration may take several forms such as informal meetings or formal teams with members of different companies. In general, two types of collaboration can be distinguished, namely vertical and horizontal collaboration. The former can be defined as collaboration between parties performing complementary activities or services while the latter indicates the collaboration between parties performing the same type of activities and/or services. Traditionally, collaboration was limited to partners inside the supply chain, which was considered as an isolated system (vertical collaboration). Collaboration with companies of another supply chain (horizontal collaboration) is not yet widespread. Most horizontal collaboration can be found between companies of two non-competitive supply chains but collaboration can also exist between two directly competitive firms (Naesens et al., 2009). Benefits of collaboration with suppliers are: improve customer service, reduce paperwork, increased profitability, cost reduction within organization, increase market competitiveness, benefits to the suppliers, and improve quality assurance (Akintoye, et al., 2000). Indicators for variable collaboration are: benefit to supplier, cost reduction, making a team work, sharing knowledge and improve quality.

3. HYPOTHESIS

A model conceptual framework for measure the strategic purchasing in organization with communication, coordination and collaboration and supplier involvement, there are the hypothesis.

Hypothesis 1 : Strategic purchasing is positive related to communication for supplier involvement.

Hypothesis 2 : Strategic purchasing is positive related to coordination for supplier involvement.

Hypothesis 3 : Strategic purchasing is positive related to collaboration for supplier involvement.

Hypothesis 4 : Communication with supplier is positive related to coordination and supplier involvement.

Hypothesis 5 : Coordination with supplier is positive related to Collaboration and supplier involvement.

Hypothesis 6 : Collaboration with supplier is positive related to supplier involvement.

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4. RESEARCH METHOD

The research collected data from the manufacture perspective. This perspective provided a relevant context for purchasing responsiveness. Purchasing making communication, coordination and collaboration with it's suppliers to meet customer demand. Data were collected using a questionnaire survey small and middle manufacturing. The key informants of this study from manufacture are Owner, Director, Manager, Assistant Manager, Officer and Staff. This provided collect data for sample data research with convenience sampling of 100 manufacturing firms. According to a survey 100 respondent which was conducted by means questionnaires and 94 completed questionnaires were returned. Six responses were considered incomplete and had to be discarded, and this left 86 valid responses, a response rate of 86 % of the original sample. For the test first after sixth hypothesis and result a fit model with PLS (Partial Least Square) analysis by using software smart PLS. To measure indicator reflective with Outer model and composite reliability for block indicator. Evaluation inner model indicated by value of R^2 (R-square variable exogenous) for construct variable latent by use Q square test.

5. RESULT AND DISCUSSION

Result for inner weights and outer weight provided in Table 1 and 2, and result model output PLS strategic purchasing, communication, coordination, collaboration and suppliers involvement in Figure 1.

Table 1. Inner Weight

	original sample estimate	mean of sub samples	Standard deviation	T-Stat.
Strat Purch -> Communic	0.314	0.391	0.176	1.786
Strat Purch -> Coord.	0.336	0.363	0.127	2.646
Communic -> Coord.	0.267	0.301	0.116	2.301
Communic -> Supp. Involv	0.471	0.463	0.114	4.125
Coord. -> Supp. Involv	0.063	0.088	0.105	0.599
Colabor. -> Supp. Involv	0.232	0.263	0.138	1.683
Strat Purch -> Colabor.	0.365	0.374	0.135	2.698
Coord. -> Colabor.	0.488	0.492	0.115	4.239

For six hypotheses, it is found, strategic purchasing has a positive significant effect to communication is 0.314 (T-statistics > 1.65; significant α = 0,1); positive significant effect to coordination is 0.336 (T-statistics > 1.96; significant α = 0,05); and positive significant effect communication to coordination 0.267 (T-statistics > 1.96; significant α = 0,05); and have positive effect to supplier involvement 0.471 (T-statistics > 1.96; significant α = 0,05). Coordination have positive effect to collaboration 0.488 (T-statistics > 1.96; significant α = 0.05); and not significant to supplier involvement (T-statistics < 1.65) but have effect is not directly to supplier involvement with moderator variable collaboration. Collaboration has positive effect to supplier involvement is 0.232 (T-statistics > 1.65; significant α = 0.1).

Table 2. Outer Weight

	original sample estimate	mean of sub samples	Standard deviation	T-Statistic
Strategic Purchasing				
X11	0.742	0.737	0.096	7.762
X12	0.636	0.623	0.146	4.368
X13	0.446	0.394	0.249	1.790
X14	0.621	0.609	0.174	3.574
X15	0.536	0.470	0.182	2.943
Communication				
X23	0.624	0.602	0.178	3.506
X21	0.757	0.722	0.134	5.653
x22	0.753	0.73	0.143	5.249
X24	0.730	0.719	0.119	6.139
Coordination				
X31	0.548	0.543	0.166	3.305
x32	0.839	0.825	0.065	12.988
X33	0.814	0.798	0.064	12.704
X34	0.669	0.691	0.125	5.331
Supplier Involvement				
X51	0.698	0.678	0.105	6.658
X52	0.554	0.509	0.220	2.523
X53	0.664	0.672	0.146	4.554
x54	0.683	0.631	0.205	3.337
X55	0.603	0.592	0.176	3.432
Collaboration				
X41	0.740	0.741	0.072	10.251
X42	0.505	0.505	0.109	4.623
X43	0.660	0.651	0.101	6.528
X44	0.791	0.791	0.055	14.266
X45	0.722	0.712	0.090	8.010

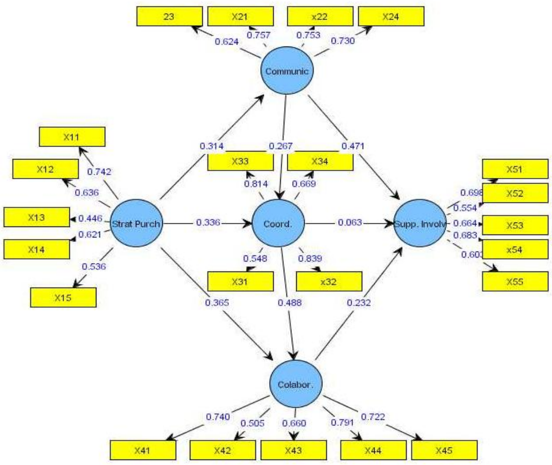

Figure 1.Strategic Purchasing with Supplier Involvement Model

6. CONCLUSION

This study represents how purchasing department to prepared material for production operation. Department purchasing has a strategic to purchase a material from suppliers, staff in purchasing making communication, coordination and may be collaboration between organization and suppliers for involvement. The relationship between the construct were examined with structural equation modeling using the partial least square (PLS) approach. The performing validity and reliability analyses on each of the measure model with outer model. This study results: strategic purchasing is positive related to communication, coordination and collaboration for supplier involvement. Communication with supplier is positive related to coordination and supplier involvement. Coordination with supplier is positive related to Collaboration and positive to supplier involvement but not directly. Collaboration with supplier is positive related to supplier involvement.

7. REFERENCES

Akintoye, A., McIntosh, G., Fitzgerald, E., 2000, "A Survey of Supply Chain Collaboration and Management in the UK Construction Industry", European Journal of Purchasing and Supply Management Vol. 9 pp.119-134.

Asif, S., Sargeant, A., 2000, "Modelling Internal Communications in the Financial Services Sector", European Journal of Marketing Vol.34. No.3/4, pp.299-317.

Banerjee, P., 2003, "Resources, Capability and Coordination: Strategic Management of Information in Indian Information Sector Firms" International Journal of Information Management Vol.23 pp. 303–311.

Chen, C.C., 2005, "Incorporating Green Purchasing into the Frame of ISO 14000" Journal of Cleaner Production Vol.13 pp. 927-933.

Chen, I.J., Paulraj, A., 2004, "Towards of Theory of Supply Chain Management: the Construct and Measurement", *Journal of Operations Management Vol.22, pp. 119-150.*

Eng, T.Y., 2006, "An Investigation into the Mediating Role of Cross-Functional Coordination on the Linkage between Organizational Norms and SCM Performance", Industrial Marketing Management Vol.35 pp.762-773.

Fritz, M., and Hausen, T., 2007, "Electronic Supply Network Coordination in Agrifood Networks Barriers, Potentials, and Path Dependencies", International Journal Production Economics.

Hu, A.H., Hsu, C. W., 2006, "Empirical Study in the Critical Factors of Green Supply Chain Management (GSCM) Practice in the Taiwanese Electrical and Electronics Industries" IEEE International Conference on Management of Innovation and Technology pp.853-857.

Jacobs, F.R., Richard B.C., Nicholas J.A., 2009, "Operation and Supply Management", McGraw Hill 12th Edition.

Kaynak, H., and Hartley, J.L., 2008, "A Replication and Extension of Quality Management into the Supply Chain", Journal of Operations Management Vol. 26 pp. 468-489.

Naesens, K., Gelders, L., Pintelon, L., 2009, "A Swift Response Framework for Measuring the Strategic Fit for a Horizontal Collaborative Initiative" International Journal of Production Economics, www.elsevier.com/locate/ijpe

Wu, B., 2006, "Supplier-buyer Collaboration in the Supply Chain Management" IEEE International Conference on Management of Innovation and Technology pp.839-843.