CRITICAL DETERMINANTS OF AGILE SUPPLY CHAIN IN BUYER AND SUPPLIER RELATIONSHIP: A LITERATURE REVIEW AND FUTURE DIRECTION

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Abstract

In today's competitive environment, businesses are increasingly reliant on the relationships they have with their suppliers or buyers and are demanding that they adhere to high standards in a timely manner. The purpose of this conceptual paper through cross disciplinary literature review is to identify critical determinants of agile supply chain and provides a new theoretical framework for underpinning and driving supply chain agility. The paper focuses on elements of organizational capabilities particularly partner's characteristics, alliance management and process capabilities which organizations deploy for building a good relationship between buyer and supplier and create competitive advantage in responding to unpredictable market changes.

Key Words: *supply chain management, agile supply chain, buyer and supplier relationships, innovative products*

JEL Classification: M Supply Chain Management

1. INTRODUCTION

The prime focus in all definitions of supply chain management (SCM) emphasises on the relationships between partners in the supply chain, integrating activities from the original supplier to end customer with the benefits of adding value, maximizing profitability through efficiencies, and achieving customer satisfaction (Stock and Boyer, 2009, Hitt et al., 2008). Fierce competition in today's global markets, the introduction of products with shorter life cycles, and the heightened expectations of customers have forced business enterprises to invest in, and focus attention on their supply chains. To succeed in the twenty-first century however, managing complexity, relationships and change in a supply chain become fundamental critical success factors (Burgess et al., 2006). Managing relationship

is vital as supply chains are generally complex with numerous activities usually spread over multiple functions or organizations and sometimes over lengthy time horizons. Therefore, it is necessary to overlay a coordination system, which may include an explicit definition of processes, responsibilities and structures aligned with overall objective and whole supply chain to bring together multiple functions and organizations. The characteristics of the products produced and processes involved in the manufacturing process contribute to the complexity of the relationship.

Managing relationships between members of the supply chain are different based on whether it is an agile or lean supply chain. Organizational relationships within the agile environment are expected to become more complex (Sarkis and Talluri, 2001). This complexity is due to the greater need for rapid integration among members of agile relationships. The complexity arises from the variety of relationships and partners that will need to be managed. No longer is the worry on just managing a one-to-one relationship among a variety of organizations, but how to manage a web of partners integrated as a single organization, with the ultimate goal of a globally optimal relationship meant to address the ultimate customer's needs. For example in agile supply chain, manufacturers aim to produce goods in any volume and deliver into wide variety of market niches simultaneously. They provide customized products at short lead times by reducing the cost of variety. Thus, the partnerships characteristic is categorized as fluid cluster where speed, flexibility and quality have become the suppliers' attribute in choosing suppliers (Cagliano et al., 2004, Christopher and Towill, 2002). Different product types call for different types of supply chain. Alignment between the type of product and the type of supply chain is important, and significant for delivery speed, delivery dependability, and cost performance (Selldin and Olhager 2007). The foundation for Fisher's theory is that products can be either functional or innovative depending on their demand pattern and market expectations. A functional product is assumed to require a physical efficient supply chain, whereas an innovative product would require a market responsive supply chain.

Collaboration among supply chain members enables different people and organizations to support each other by leveraging, combining, and capitalizing on their complementary strengths and capabilities (Barney et al., 2000). Lately, organizations have realized that integrative relationships with supply chain members can provide benefits, such as reduced cost, reduced cycle time in order fulfillment, lower inventory levels, high visibility, and reduction in the time it requires to bring new products to market (Acquaah, 2009, Andersen et al., 2009). While not all integrative relationships prove successful as the potential benefit is

significant and thus has attracted many organizations interested in long-term involvement with their supply chain members especially in the volatile market conditions. Changing customer and technological requirements force manufacturers to develop agile supply chain capabilities in order to be competitive. Therefore, companies are stressing flexibility and agility in order to respond, real time, to the unique needs of customers and markets. However, the resource competencies required are often difficult to mobilize and retain by single companies. It is therefore imperative for companies to co-operate and leverage complementary competencies.

2. BUYER AND SUPPLIER RELATIONSHIPS

The literature on inter firms relationship has grown consistently over the past few years (Cousins, 2002). Academics and practitioners have realized that in order for firms to become flexible, adaptable and efficient, they must focus their resources on managing the supply process. This approach has lead to firms operating strategies as outsourcing (Tate, 1996), supplier delegation (Cousins, 1999) and supplier tiering (Hines, 1996). The applications of these strategies have caused dramatic changes in the nature of the relationships between firms, from a traditionally widespread range of suppliers towards fewer suppliers and therefore a greater of higher dependency and complex relationships (Cousins, 1999).

Traditional relationships in supply chain network are often described as “arm’s-length” market relationships, characterized by nonspecific asset investments, minimal information exchange, and separable technological and functional systems within each firm (Sheu et al., 2006). Traditional relationship has been limited to contact primarily between the buyer and supplier in a supply chain network. SCM has led to a shift from adversarial and power-based relationships towards collaborative and trust-based relationships in the supply chain. Recent studies indicate the need for shifting the view of inter-organizational relationships from arm’s-length to long term (Harrison and Van Hoek, 2008), collaborative relationships (Handfield and Bechtel, 2002). A basic premise of supply chain management is that close relationships with supply chain members may give the firm and its supply chain members’ competitive advantage over other supply chains by delivering superior value to the customer through reduced cost, increased quality, and superior delivery performance. Supply chain can deliver some powerful advantages to participating organizations and the collaboration process is worthwhile with coordination efforts and investments leading to enhanced profit performance and the realization of competitive advantages over time (Jap, 2001). Through collaboration participating organizations may support

each other by leveraging, combining, and capitalizing on their complementary strengths and capabilities.

2.1 The Significance of Partners Characteristics Capability

Success of both domestic and cross-border collaborations may be a function of partner characteristics (Hitt et al., 2000). Different types of inter firm diversity among partners may affect the performance of alliance. Collaborative value creation through alliance requires the simultaneous pursuit of partners with similar characteristics on certain dimensions and different characteristic on other dimensions. Partnering firms need to have different resource and capability profiles yet share similarities in their social institutions (Sarkar et al., 2001). These partner characteristics are important since they help in the formation of relationship capital or the behavioral aspects of an alliance that find expression in relational dynamics such as mutual trust, commitment, and information exchange (Cullen et al., 2000).

Involving both partners in long term strategy planning is an integral part of the partnership process. Partners must work with clearly spelled out ground rules and procedures (Tate, 1996). Pansiri (2008) observes that like relationships between people, organization relationships begin with courtship, where organizations attracted to each other seek to discover their compatibility. This is ranked as one of the main ingredients for a successful alliance because the sophistication and expression of the strategy will not work if relationship is not workable (Hagen, 2002). Compatibility covers the array of issues including broad historical, philosophical, and strategic grounds, values and principles, and hope for the future (Kanter, 1994), cultural and organizational issues and the extent to which an alliance partner has complementary goals and shares similar orientations that facilitate coordination of alliance activities and execution of alliance strategies (Shamdasani and Sheth, 1995). Ambiguity must be avoided as should coordinated activities. According to Lynch (1990) clarity of focus is vital, ambiguous goals, fuzzy directions, and uncoordinated activities are the primary causes of failure of cooperative ventures. To avoid the pitfall of ambiguity or different goals, partners should make sure they have synchronous goals to begin with, and then review what has been accomplished in terms of their original goals.

Established reputations impede mobility and produce returns to firms because they are difficult to imitate (Barney, 1991, Rose and Thomsen, 2004). Resource complementarities are also crucial to collaborative success. As noted by Love and Roper (2009) resource complementarities involve both uniqueness and symmetry. Complementarities determine the mix of unique and valuable resources available

to achieve strategic objectives, thus enhancing competitive viability of the alliance (Sarkar et al., 2001). Alliance partners are motivated to associate themselves with partners with their required resources. Sarkar (2001) suggests that performance is likely to be enhanced when firms are able to manage the paradox involved in choosing a firm that is different, yet similar. Thus complementary resources and capability profiles may enhance the value generated in alliances, as do similarity in the social institutions of the partners.

2.2 The Significance of Alliance Management Capability

Effective management of buyer-supplier relationships is an important research domain (Monczka et al., 1994, Tan, 2001). Managing the network effectively is the likely objective in buyer and seller relationships that entail close coordination between buyers and suppliers (Saeed et al., 2005). The establishment of business relationships and successful marketing recognizes commitment, trust, cooperation and conflict management as vital elements. Commitment refers to the willingness of partners to make an effort on behalf of the relationship and the belief of the committed party that the relationship is worth working on to ensure that it lasts indefinitely (Morgan and Hunt, 1994, Dwyer et al., 1987). A high level of commitment provides a context in which both parties can achieve their individual and joint goals without raising the spectra of opportunistic behavior (Mohr and Spekman, 1994). It is believed that committed customers will offer more value to their suppliers as their contribution to the on- going relationship.

In strategic alliance, when knowledge is exchanged, firms have to options: they can try to protect themselves with contracts or they can resort to trust. In management literature there has been a noticeable increase in the importance of trust in different forms of inter organizational relationships (Sahay, 2003), and the need for trust between partners has been identified as an essential element of buyer-supplier relationships (Crotts and Turner, 1999, Cullen et al., 2000). A buyer and a supplier who trust each other are more likely to openly share detailed cost breakdowns with each other. Open access to such information enables partners to identify and manage inefficiencies and potential redundancies, whereby the total costs incurred in supply–chain relationships can be reduced.

Organizations are forming partnerships to enhance their capabilities to improve product quality, innovation and market reach (Duffy and Fearne, 2004). Regardless whether the strategic alliance is a joint venture, research consortium, marketing agreement or supply chain partnership, members from the organizations need to work together collaboratively. Mohr and Spekman (1994) suggest that organizations cannot develop enduring competitive advantages

without working cooperatively with their suppliers and distributors. Organizations working cooperatively with partners are seen to be able to reduce the complexity of their environment and gain more control over environmental factors.

Conflict is almost unavoidable in buyer-supplier relations as a consequence of two firms trying to maximize their returns from the business relationship. Conflict management derives its importance due to several industry trends currently in place. Increase in strategic outsourcing by firms, globalizations of markets, increasing reliance on suppliers for specialized capabilities and innovation, reliance on supply networks for competitive advantage, and emergence of information technologies that make it possible to control and coordinate extended supply chains (Lee, 2002, Fisher, 1997). Reducing conflict and promoting stability is one of the objectives of collaborative partnership (Kozan et al., 2006, Hitt et al., 2008). Long term collaboration may result from managing conflict efficiently by members in the supply chain.

2.3 The Significance of Process Capability

Process efficiency is the likely objective in buyer and seller relationships that entail close coordination between buyers and suppliers (Saeed et al., 2005). The need for adaptation and synchronization of process in these types of relationships is high. The need to integrate these processes also arises to maximize flow, focus on end customer and compete on a range of different competitive priorities. Nesting the capabilities of these processes creates power and synergy for the network. If different links in the supply chain are directed towards different competitive priorities, then the chain will not be able to serve the end-customer (Harrison and Van Hoek, 2008).

Central to collaboration is the exchange of large amounts of information along the supply chain, including planning and operational data, real time information, and communication. Information is seen as the ‘glue’ that holds together the business structures that allow supply chains to be agile in responding to competitive challenges. The backbone of the supply chain business is IT which is used to acquire, process, and share information among supply chain partners for effective decision making (Sanders and Premus, 2002, Lewis and Talalayevsky, 2000, Handfield and Nichols, 1999). The introduction and utilization of integrated information systems for managing the supply chain would not only enhance quality as well as reduce delivery times and costs, but also enhance the company’s competitive position (Narasimhan et al., 2009).

Innovation is a new way of doing something or "new stuff that is made useful" (McKeown, 2008). It may refer to incremental and emergent or radical and revolutionary changes in thinking, products, process, or organizations. In economics the change must increase value, customer value, or producer value. In the organizational context, innovation may be linked to performance and growth through improvements in efficiency, productivity, quality, competitive positioning and market share (Guan and Ma, 2003). From a resource-based view of the firm, innovative capability, among other capabilities, is seen as critical to a firm achieving strategic competitiveness (Corner 1991). Guan and Ma (2003), reveal export growth is closely related to the improvement of innovation capability dimensions, except manufacturing capability. Competitive advantages in the global market are derived from the ability to develop and commercialize new technologies more rapidly than other firms, and from the ability to promote and facilitate the creation and dissemination of technological innovations (Guan and Ma, 2003, Zheng et al., 2009).

Flexibility is defined as increasing the range of products available, improving the firm's ability to respond quickly, and achieving good performance over a wide range of products (Upton, 1995). The problem of definition is felt to a significant extent; along with the difficulty of a conceptual unification of the terminology there is also the great variability in the fields of application, of the concept of flexibility (De Toni and Tonchia, 2005). From a general point of view, flexibility is a capability of adaptation/change (De Toni and Tonchia, 2005). Flexibility can be considered as an important precondition for value creation through business relationships. Firms are required to increase its adaptation capability to respond to demand changes. Customer-specific adaptations are all those change in the supplier's resource deployment which are only done for the customer in question in order for better match the supplier's offering to the customer's problem (Brennan and Turnbull, 1997; Hallen et al., 1991).

3. FUTURE DIRECTIONS AND CONCLUSION

The research focusing on determinants of agile supply chain in the context of buyer and supplier relationships provides us with an insight on how organizations may deploy its capabilities in achieving supply chain agility. Knowing the importance supply chain agility has influenced the three main organizational capabilities identified earlier and the need to incorporate partner's characteristics, alliance management and process capability in the buyer and supplier relationship is crucial. It provides framework to assist policy makers in developing integrative relationships with other members in the supply chain. In today's competitive

global market, enterprises must possess the capability to design and deliver innovative products with great value to customers in a timely matter. Each organization must focus on its own strong area where it will be uniquely competitive. Hence, all partners should ruminate about where and how values are created, and what contribution they can make based on their core competencies.

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