Mediating Variables in the Relationship between Market Orientation and Supply Chain Performance: A Theoretical Approach

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Abstract  
This study was intended to propose a conceptual frame work to facilitate further empirical studies about the relationship between market orientation and supply chain performance. It was motivated by the scantiness of studies about the link between marketing and supply chain management as well as calls from previous scholars for more research. This study establishes a conceptual model in which supply chain management strategy, organizational learning, supply chain innovation, trust, commitment and collaboration play mediating roles in the relationship between market orientation and supply chain performance. The study theorizes that market orientation improves organizational learning, supply chain management strategy, supply chain innovation, trust and commitment. Trust and commitment increase collaboration and all the aforementioned variables combined improve supply chain performance. Future researchers can use the current proposed frame work to conduct empirical studies that will fill some of the current knowledge gaps and specify significantly beneficial managerial implications.  

Key words: Market orientation, supply chain, strategy, learning, innovation, collaboration, performance.  

1.0 Introduction  
In the contemporary turbulent business environment, intense competitive forces have exerted pressure on companies to devise means of enhancing their performance and competitive advantage. Consequently, firms have recognized the significance of enhancing their supply chain performance (Knowles, 2005). As today’s firms become aware that they can no longer effectively compete in isolation of their suppliers and other entities in the supply chain, they have shifted their attention from competition between firms to competition between the entire supply chains (Hult et al; 2007; Ntayi et al; 2009; Miguel et al; 2010). When there is failure in a firm’s supply chain performance, it is competed out of the market and is therefore likely to collapse (Eyaa and Ntayi, 2010). This situation has forced firms to become more focused on their supply chain management capability as a means to improve or sustain their competitiveness (Udin et al; 2006). Supply chain management(SCM) is a relatively new discipline (Ponomarov and Holcomb, 2009) and has emerged as common practice across industries because it encompasses long-term strategic alliance, supplier-buyer partnerships, cross-organizational logistics management, joint planning, control of inventory, and information sharing (Banomyong and Supatn 2011). Supply chain inefficiency has been identified as one of the most prevalent issues facing the small- to mid-size enterprise (SMEs) (Lewis, 2005). For example, SME supply chains in Uganda are characterized by late deliveries, poor quality products or no deliveries at all, which are indicators of poor supply chain performance (Ntayi and Eyaa (2010).
This is a serious problem especially given that SMEs globally contribute greatly to economic growth and development of both developed and developing economies (Antony and Bhattacharyya, 2010; confederation of Tanzanian industries 2009).

According to Ntayi et al; (2009), it is necessary to know the functioning of supply chains. Unfortunately, there is paucity of knowledge about them especially in developing countries. It is therefore crucial to identify the predictors of supply chain performance so as to devise a mechanism for improving the performance and competitiveness of organisations. According to Zelbst et al; (2010), supply chain performance focuses on the ability of the supply chain to satisfy the needs of the ultimate customers of the supply chain. To achieve better supply chain performance, an organisation should develop and implement an appropriate supply chain management strategy. Min and Mentzer (2000) studied the relationship between marketing and supply chain management and established that market orientation plays a fundamental role in supply chain management and agitated for more empirical studies in this field. Market orientation is explained in the context of implementing the marketing concept that focuses on satisfying customer needs better than competitors (Racel et al; 2007; Mason and Harris, 2006; Zhou, et al; 2009).

Green et al; (2006) found a positive relationship between market orientation, supply chain management strategy and organizational performance and concluded that there is need for more research which incorporates supply chain performance. Ju¨ttner et al; (2010) indicated that supplier and customer relationships which are components of market orientation influence supply chain performance in terms of shorter end to end pipe line time, total supply chain costs and shorter lead time. Vieira, (2010) argues that market orientation influences organizational learning and Miguel et al; (2010) stipulated that knowledge sharing and learning positively influence supply chain performance. Ferry et al (2007) also established that cooperative behaviour such as trust and Commitment influence supply chain performance. As Farrelly and Quester (2003) stated, there is little empirical research that examines the effects of marketing orientation on trust and commitment. Fawcett et al; (2006) also added that little has been written concerning the commitment levels among supply chain partners. The above research gaps indicate a dire need for this study to provide a detailed conceptual frame work for further empirical investigation of the relationship between market orientation and supply chain performance.

2.0 Theoretical back ground

This study will base on the theory of the Resource Based View of the firm. The Resource Based View (RBV) of the firm postulates that, resources internal to the firm are sources of competitive advantage. Such resources should be valuable, rare, inimitable and difficult to substitute .Resources believed to be valuable are those that are capable of facilitating conception or implementation of strategies that improve performance, exploit market opportunities or neutralize impending threats (Barney, 1991). The RBV emphasizes the internal organizational capabilities in formulating strategy and strategic choice to achieve competitive advantage. Previous researchers indicate that intangible assets such as knowledge management, organizational learning and market orientation allow an organization to develop those abilities that enhance competitive advantage leading to superior market performance (Day, 1984). Tan et al; (2011) in their study of organizational capabilities and relationship quality performance implications considered market orientation as one of the organization capabilities.

We also draw from Hurley and Hult (1998) and consider innovation or innovative capacity as a capability that enhances competitiveness and performance. Lennon and Wollin (2001).also maintained that other than other organizational resources such as technology, organizational learning is more difficult to duplicate or imitate. Manuel et al; (2006) argue that relational capabilities are steadily created as a result of a lasting relationship between two or more companies .They also state that a close relationship with a high level of trust and commitment between companies is necessary to develop relational capabilities. In line with the previous scholars, this study considers market orientation and organizational learning, as intangible organizational resources that enhance supply chain management strategy. We also consider trust, commitment and collaboration as relational capabilities that can be utilized to enhance supply chain performance.

3.0 Literature review and theoretical frame work

3.1 Market orientation and supply chain performance

According to Salvador et al. (2001) as cited by Rungtusanatham, (2003) as firms interact with suppliers and customers regarding materials flow and quality issues, they can expect better time-related operational performances in terms of speed and delivery punctuality.
As cited by Green (2006), Mason (2003) suggests that effective supply chain management involves a marketing orientation and cost reduction which improves the firm’s financial performance. Green et al; (2006) while analyzing the study by Elmuti (2002) on the relationship between supply chain management and perceived organizational success revealed that suboptimal performance in the area of supply chain management could be due to a weak marketing orientation. The results from the study by Cervera et al; (2001) show that, every single component of a market orientation is significantly and positively correlated with global performance. Lee et al (2007) found out that firm’s internal integration, integration with suppliers and customers have positive impact on supply chain performance. Ellinger et al., (2000) as cited by Ju’tner et al; (2010) indicated that inter functional coordination has a positive effect on customer service-related performance. Ju’tner et al; (2010) proposed a model linking marketing and supply chain management integration with shareholder value. The model indicated that supplier and customer relationships which are components of market orientation influence supply chain performance in terms of shorter end to end pipeline time, total supply chain costs and shorter lead time. We therefore propose the first hypothesis;

H1: Market orientation affects supply chain performance

3.2 Market orientation and organizational learning

As cited by Hult et al (2003), there are four dimensions of organizational learning according to Hult (1998) and Hult et al (2000) which include team orientation, systems orientation, learning orientation and memory orientation. On the other hand, Narver and Slater (1990) asserted that market orientation consists of the three components of customer orientation, competitor orientation and inter-functional coordination. Slater & Narver (1995) defined organizational learning as the acquisition, interpretation and dissemination of the organizational information inside firms’ culture. They also argue that market orientation and organizational learning are inseparable. Similarly, Hurley and Hult (1998) supported the association between market orientation and learning and added that learning is a cultural feature of the organization that deals with marketing and customer demands.

A study by Vieira (2010) also revealed that market orientation has a strong impact on organizational learning. Min and Mentzer, (2000) also recognized the contribution of market orientation to information sharing with in the supply chain which is considered part of practicing organizational learning. They also assert that market orientation helps a firm to obtain organizational learning from other firms. We therefore propose the following hypothesis;

H2: Market orientation improves organizational learning

3.3 Market orientation and supply chain management strategy

As cited by Ju’tner et al; (2010), Mentzer et al. (2008) argued that supply chain strategies depend on a close interaction with in-company marketing and sales resources, processes and skills. Wisner (2003) used structural equation modeling in developing and analyzing a theoretical framework for supplier management and customer relationship strategies, supply chain management strategy, and firm performance. The study revealed that supply chain management strategy dimensions include, creating a greater level of trust throughout the supply chain, identifying and participating in additional supply chains, establishing more frequent contact with supply chain Members, creating a compatible supply chain communication and involving all supply chain members in your firm’s product/service marketing plans. It was established that supplier management and customer relationship strategy which are consistent with the market orientation have a positive impact on supply chain management strategy. A study carried out by Green et al; (2006) also revealed that the marketing orientation factors relate positively and significantly to supply chain management strategy. Min and Mentzer (2000) in their theoretical study on the role of marketing in supply chain management argued that the marketing orientation plays a fundamental role in implementing supply chain management. We therefore propose the hypothesis below;

H3: Market orientation affects supply chain management strategy

3.4 Organizational learning and supply chain performance

Corporations require new skills to face the uncertainties of the new environment Bhatnagar (2006). These new skills are acquired through organizational learning. Enhanced organizational learning is expected to yield performance gains (Day, 1994; Slater and Narver, 1995). Grant, (1996) also stated that knowledge, and the capacity to create it through learning is a key productive resource in terms of contribution to value added, strategic significance, and competitive advantage. Hult et al., (2004) revealed that knowledge-sharing between distributors and their suppliers is intended to increase their supply chain performance in terms of costs of serving, cycle time, coordination of activities and competitive advantage.
Grant, (1996), stated that organizational learning from their supply chains’ relationship improves their ability to perform their roles more efficiently. Brown and Hendry as cited by Min and Mentzer (2000) argued that a combination of organizational learning and working better with suppliers in supply chain management improves information exchange which improves processes for cost savings and supply chain performance benefits. Cantner et al; (2009) as cited by Kamya et al; (2010) argue that the performance of knowledge organizations in the market is expected to be more superior to that of the traditional organizations. In a related argument, Lane et al., (2001) as cited by Miguel et al; (2010) asserted that inter firm learning develops a critical mechanism that facilitates coordination and supply chain performance. This is reechoed by Miguel et al; (2010), who acknowledged that Knowledge sharing and learning have a positive influence on the supply chain’s performance. Since the previous researchers reveal a link between organizational learning and supply chain performance, we propose the following hypothesis;

*H4: Organizational learning improves supply chain performance*

### 3.5 Supply chain management strategy and supply chain performance

Wisner, (2003) gave examples of activities that strengthen the supply chain management strategy of a firm. These include creation of a greater level of trust among supply chain members, establishing more frequent contacts with supply chain members, creation of a seamless communication capability among supply chain members, and involving other supply chain members in development of the firm’s marketing plans. Keah (2002) as cited by Green et al; (2006) examined contemporary practices and concerns of supply chain management. He concluded that efficient and effective supply chain management positively impacts product quality, customer service, and competitive position of a firm. Green et al; (2006) contended that supply chain management strategy correlates positively and significantly with market performance. Wisner (2003) also found out that supply chain management strategy influences firm performance. Park and Hartley (2002) as cited by Green et al; (2006) indicated that the supply chain practices of first tier suppliers affect the performance of second-tier suppliers, supporting the view that supply chain best practice should propagate back through the entire supply chain to improve overall supply chain performance. Roh, (2008) stipulates that supply chain management is important for successful supply chain outcomes. Hence we propose the following hypothesis;

*H5: Supply chain management strategy improves supply chain performance*

### 3.6 Market orientation, trust, commitment and supply chain performance

Morgan and Hunt, (1994), refer to commitment as a desire of a committed partner for the relationship, and specifically to an enduring desire to maintain a valued relationship and willingness to work to maintain it. According to Kwon and Suh, (2005), no commitment is consummated unless the partners recognize the existence of unbroken trust. Bigne and Blesa, (2003), state that most studies of the channel define trust as the degree to which a firm believes that its trading partner is honest and/or benevolent. Ryu et al; (2009) also maintained that commitment is preceded by high levels of inter organizational trust. Fawcett et al; (2006) asserted that commitment beyond an organization’s boundaries is necessary in order to achieve Supply chain advantage. Despite this, they asserted that there is limited research regarding commitment in supply chains. Bigne and Blesa, (2003) in their study of market orientation, trust and satisfaction in dyadic relationships, contended that the effects of market orientation on the behavioural dimensions of relationships in the distribution channel are still understudied and found out that the different market orientation dimensions have different effects on trust and satisfaction. As cited by Bigne and Blesa, (2003), Siguaw et al. (1998) and Baker et al. (1999) found that suppliers’ market orientation positively influenced distributors’ commitment and that distributors’ market orientation had a significant and positive effect on suppliers’ trust and commitment.

Ferry et al (2007) studied the supply chain practice, supply chain performance indicators and competitive advantage and established that cooperative behaviour such as trust and commitment influence supply chain performance. Kwon and Suh, (2005) argued that the link between the level of trust and the degree of commitment among the parties, improves the overall supply chain performance. Morgan and Hunt, (1994) also argue that a combination of both commitment and trust produce outcomes that promote effectiveness, productivity and efficiency. According to Ryu et al; (2009) reciprocal trusting behavior and committed effort between a buyer and supplier must exist in order to enhance supply chain performance. With the above discussion, we develop the following hypotheses;

*H6: There is a positive relationship between market orientation and trust*

*H7: There is a positive relationship between market orientation and commitment*
H8: Trust improves commitment  
H9: Commitment has a positive effect on supply chain performance

3.7 Market orientation, supply chain innovation and supply chain performance

Hurley and Hult (1998) stated that research on market orientation and performance should reframe existing models to more directly incorporate innovation. According to Low et al. (2007), high levels of market orientation lead to high levels of innovativeness within a firm. Research conducted by Lin et al. (2010) found out that Customer Relationship Management (component of market orientation) is considered as critical in improving a firm’s innovation in all dimensions of product innovation, process innovation, administrative innovation, marketing innovation and service innovation. Both innovation and market orientation have been linked to higher firm performance. Vieira (2010) also showed that market orientation is positively related to innovation. Low et al. (2007) also added that innovation, or at least the firm’s capacity to innovate, has a relationship with firm performance. Innovation capability refers to the implementation or creation of technology as applied to systems, policies, programs, products, processes, devices, or services that are new to an organization (Chang and Lee, 2008). Grinstein (2008) stated that market orientation is positively related to innovation consequences. Hurley and Hult (1998) reiterated that innovative capacity help firms gain their competitive advantage and improve their performance. As cited by Lee et al. (2011), Stundza, (2009) stated that supply chain innovation brings about supply chain efficiency including reduced lead time, new operation strategies, reduction in cost, provision of consistent quality, and development of flexibility for dealing with rapid changes in the business environment. Supply chain innovation therefore improves supply chain performance dimensions. We therefore propose the following hypotheses:

H10: There is a positive relationship between market orientation and supply chain innovation  
H11: There is a positive relationship between supply chain innovation and supply chain performance

3.8 Trust, commitment, collaboration and supply chain performance

Ryu et al. (2009) found out that both trust and commitment developed as a result of interaction between two organizations result into collaboration between firms and helps to maintain this collaboration and that supply chain collaboration in turn improves the supply chain partner’s operational performance. Morgan and Hunt (1994) found out that the negative influence of a relationship commitment reduces collaboration and relationship success. Ryu et al. (2009) further added that when companies collaborate, they open their information, knowledge and assets to their partners. Sahay (2003) recognized that a crucial relationship exists between trust and collaboration. Trust has a positive influence on commitment, and improves the relationship between retail buyers and vendors (Narayandas and Rangan, 2004). As cited by Vereecke and Muyllle (2006), Simchi-Levi et al. (2002) argue that strategic partnerships between suppliers and manufacturers may have a significant impact on supply chain performance. Collaboration is a value adding resource for firms seeking to reduce costs, increase their agility and satisfy their clients (Spekman et al., 1994). Ntayi and Eyaa, (2010) found out that there is a strong positive impact of collaborative relationships on supply chain performance of SMEs.

Simatupang and Sridharan (2004) observed that information sharing significantly affected fulfillment (on-time delivery, accuracy, fill rate) and inventory performance, while it had only a moderate impact on responsiveness (lead-time and flexibility). Simchi-Levi et al. (2002, p.5) as cited by Knowles et al. (2005) also argue that “collaborative partnerships between suppliers and manufacturers may have a significant impact on supply chain performance”. According to Simatupang and Sridharan (2002), the constructs of collaborative relationships are information sharing, decision synchronization and incentive alignment. Collaborating between supply results in substantial cost savings, flexibility and reduced lead time; these aspects lead to improved supply chain management and performance (Doherty, 2001; Selen and Soliman, 2002) as cited in Vereecke and Muyllle (2006).

We therefore propose the following hypotheses:

H12: Trust and commitment improve collaboration  
H13: There is a positive relationship between collaboration and supply chain performance
4.0 Discussion

In this paper, a conceptual model is proposed that links marketing orientation and supply chain performance. This is imperative due to the increasing call from previous scholars for the need for more research on the relationship between marketing and supply chain management (Min and Mentzer 2000; Green et al; 2006). Previous researchers have also stressed that research on the mediating variables between market orientation and supply chain performance is still limited (Fawcett et al; 2006; Green et al; 2006; Farrelly and Quester 2003; Bigne and Blesa, 2003). This study presents a conceptual framework in which different mediating variables participate in the relationship between market orientation and supply chain performance. In this study, it was established that higher levels of the dimensions of market orientation namely; customer orientation, competitor orientation and inter-functional coordination (Narver and Slater 1990) positively affect supply chain management strategy. The study found out that supplier management and customer relationship strategy which are consistent with the market orientation improve the dimensions of supply chain management strategy which include creating a greater level of trust throughout the supply chain, identifying and participating in additional supply chains, establishing more frequent contact with supply chain Members, creating a compatible supply chain communication and involving all supply chain members in your firm’s product/service marketing plans. Effective supply chain management through an appropriate strategy enhances supply chain performance.

The study also establishes that as firms increase their market orientation, the need to understand their competitors and customers motivates them to improve their learning. Inter-functional coordination also provides an ambient atmosphere for organizational learning. When organisations learn, they acquire new skills. Lane et al., (2001) as cited by Miguel et al; (2010) argued that inter-firm learning develops a critical mechanism that facilitates coordination and supply chain performance. In a related argument, Miguel et al; (2010), further asserted that Knowledge sharing and learning have a positive influence on the supply chain’s performance. Other scholars (Hult et al; 2004; Grant, 1996; Brown and Hendry as cited by Min and Mentzer 2000) also support the notion that organizational learning improves supply chain performance.

Higher levels of market orientation will also enhance the firm’s supply chain innovation (Hurley and Hult 1998; Low et al; 2007; Lin et al; 2010; Vieira 2010), so as to invent new ways of satisfying customers as well as out performing their rivals. As new efficient methods are used for example modern technology, supply chain performance is likely to improve. This study also found a positive relationship between market orientation, trust and commitment. As cited by Bigne and Blesa, (2003), Siguaw et al. (1998) and Baker et al. (1999) found that the market orientation of a supplier positively influenced distributors’ commitment and that market orientation of distributors had a significant and positive effect on suppliers’ trust and commitment. When partners’ trust increases, their commitment in the relationship also increases.
Some scholars however argue that trust and commitment should be reciprocated. As partners in the supply chain become committed to their roles, their performance within the supply chain will improve. It was further established that both trust and commitment result into collaboration between firms and helps to improve the supply chain partner’s operational performance (Ryu et al; 2009). Previous scholars (Spekman et al., 1994; Ntayi and Eyaa, 2010; Simatupang and Sridharan 2004) have also supported the positive relationship between collaboration and supply chain performance.

5.0 Conclusion and recommendations

This study proposes a frame work of the relationship between market orientation and supply chain performance. Supply chain management strategy, organizational learning, supply chain innovation, trust, commitment and collaboration have been found to play mediating roles in this relationship. Future researchers can use the proposed model to empirically test the strength of the relationships between market orientation and supply chain performance and the mediators in this relationship. The researchers in future should also use this model to empirically find out the strength of the interrelationships among the dimensions of each of the variables in the proposed conceptual model. By conducting empirical studies basing on the proposed framework, the future researchers will fill some of the gaps in the previous research works regarding the relationship between market orientation and supply chain performance. This will contribute to the current body of knowledge and enhance organizational and supply chain management for better performance and competitiveness. Like any other study, this study is not without limitations. For example, the current proposed model is not exhaustive. Future research may extend this model for instance to include the antecedents of market orientation such as interdepartmental connectedness, interdepartmental environment and rules for job execution so as to establish how marketing orientation can be enhanced.

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