

Hybrid Communication Strategies and Tools as a Strategic Lever to Improve Supply Chain Performance

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Abstract

In this highly volatile global economy, organizations need to deploy various levers to improve supply chain performance. Supply chain needs to be responsive and agile to changing market conditions. The objective of the supply chain is to have the right products and services in the right quantities, at the right place, at the right moment, produced with minimal cost with the required quality level. To facilitate that, communication is considered one of the key levers to its success. While traditional communication approaches improved supply chain performance, in this dynamic environment there are still significant gaps and few opportunities to innovate the communication process within the whole supply chain. The purpose of this article is to explore how organizations can improve the performance of the communication process within the whole supply chain through the application of hybrid strategies and tools. The research methodology was qualitative exploratory in nature to confirm the relevance of the research question, and to explore through extensive literature review different strategies and tools to be applied to improve communication in supply chain.

Supply chain managers can potentially benefit from this research, this study contributes to communication process in the supply chain by going beyond the benefits and problems of communication process that occur in day-to-day operational communications. It adds a new perspective to fit the flexibility and agility exist in the market place by proposing the use of hybrid strategies and tools to improve connectivity, information exchange, knowledge sharing and relationship alignment in the networked supply chain.

Keyword: supply chain management, communication, information exchange, knowledge sharing

Paper Type – Research Paper

1. Introduction

“The ability of organizations to sense and respond quickly, easily, predictably, and with high quality will become increasingly critical as the complexity, volatility, and competitiveness of global markets continues to grow” (Hofman & Cecere, 2005, p. 19). It is important to look beyond the flexible factory to the flexible supply chain (Stevenson & Spring, 2007). Supply chain is the interrelated processes within your firm and across other firms to produce product and services to match customer wants and needs (Krajewski et al., 2013). “Supply chain collaboration is defined as a long-term relationship where participants generally cooperate, share information, and work together to plan and even modify their business practices to improve joint performance (Whipple et al., 2010)” (Ralston, 2014, p. 4). “A basic form of collaboration involves the exchange of information to the joint benefit of the buyer and supplier (Chen, 2003). Information may be shared at all relevant levels of the planning and control process, that is, in forecasting, in actual planning, as well as in execution or replenishment (Vollmann et al., 2005)” (Vereecke & Muylle, 2006, p. 1179).

Highly volatile markets are characterized by short lead-time requirements and a large diversity of product and service components, thus posing exceptional requirements for operations and logistics (Ogulin et al., 2012). Organizations have developed and applied various levers to improve the performance of supply chains. Communication is one of the key levers to achieve that. Information sharing has been singled out as the most crucial factor for successful supply chain management (Bowersox 2000; Handfield et al., 2000; Handheld, 2002; La Londe, 2002, Kwon & Suh, 2004). Communication between various stakeholders, customers and suppliers is needed to be facilitated in the supply chain to achieve access to tremendous amounts of information anywhere and anytime. Companies need to achieve different levels of electronic integration, based on data consistency and

system integration to gain desired levels of control, coordination and learning among their channel partners (Ruey-Jer et al., 2008, p. 557). Ralston (2014) say that poor internal communication prior to collaboration in addition to other factors have all lead to collaborative failures.

Upon examining existing literature from Supply chain management, public relation and communication management, information exchange and knowledge sharing, it is found that agreement exist about the need for improving the communication process as a lever to improve supply chain performance.

Different studies approached that objective differently. Some studies in the literature emphasized internal organizational communication. Welch and Jackson (2007) in their study concluded that internal communication is crucial for successful organisations as it affects the ability of strategic managers to engage employees and achieve objectives. Some studies concentrated on difficulties and conflicts associated with day-to-day communications (Oosterhuis et al., 2012), another study by Smarandache and Vladutescu (2014) emphasized the need to develop practical communication intervention in order that the theory-research of communication infuses the practice of communication. This study differs than previous ones as it approached communication to achieve macro and micro flow through the use of hybrid strategies and tools.

Organisations need channels to transmit information about performance, goals and goal accomplishment, processes and practices, and to foster synchronization and problem solving across the organisational borders (Kelly, 2000). The aim of this paper is to explore how organizations can improve the performance of the communication process within the whole supply chain and provide a broad review of different strategies, tools and approaches to improve supply chain communication internally and externally. In this paper, the researcher first presented a brief definition and discussion of supply chain, supply chain management, supply chain as connected network of relationship along with its importance. As supply chain communication is still the subject of many research activities, following that the researcher discussed briefly importance of improving the communication within this connected network of relationship, and described current problems that affect the success of communication within the whole supply chain and briefly mentioned some of the current tracks and studies leading to improvement in communication in supply chain. To answer the objective of the study, a literature review was then presented to reflect hybrid tools and strategies that are needed to facilitate communication in the supply chain and finally conclusions and future direction was presented.

2. Supply Chain Management

Organizations are operating in a dynamic environment where organizational success depends on how they continuously strive to improve their supply chain to achieve quality, cost, speed, flexibility, and customer value. Supply chain is the lifeblood of any business organization that connects suppliers, producers, and final customers in a network to create and deliver products and services to the customers (Stevenson, 2012, P. 665). "Supply chain management (SCM) is the task of integrating organizational units along a SC and coordinating materials, information and financial flows in-order to fulfil ultimate customer demands with the aim of improving competitiveness of the Supply Chain as a whole" (Stadtler, 2004, P576).

2.1 Communication in the Supply Chain

Developing a supply chain's competitive edge through the utilization of communication and knowledge sharing often involves the application of strategies, tools, approaches, capabilities and resources that facilitate the alignment, integration and consistency in the supply chain thus creating better supplier-customer relationship which lead to improve the efficiency in supply chain operations. "Communication includes the ways in which information is exchanged and shared between partners and the openness between partners in their exchanges of information" Ogulin et al. (2012). Daft 1997 cited in Kelly (2000) added to the previous definition that information is exchanged and understood by two or more people with the intent to motivate or impact actions.

The flow of material and financial flow is highly dependent on the flow of accurate and real-time information in the whole supply chain. Successful communication facilitates the agility in the exchange of Information which will improve the responsiveness of the supply chain. Organizations shared many types and different data, information and knowledge that include: product / service information, Market demand, forecasting, production planning and scheduling, resource planning, capacity planning, inventory planning, etc. Exchanging the incorrect information cost the firm its competitive advantage while Sharing the right information at the right time with the right trading chain partners can reduce costs and enhance competitive advantage. Porterfield (2007).

Within the literature, there is a large body of knowledge about communication in organizations. Stevenson and Spring in their study explored the role of supply chain design, supply chain collaboration and inter-organisational information systems on flexibility and concluded that flexibility achieved along the entire supply chain depends

on the extent to which data is shared. Further added, inter-organisational information systems and Internet technologies facilitate the sharing of real-time information and allow organisations to be more effectively co-ordinated at the network-level. The results of Ogulin et al. (2012) study supported and emphasized that informal connection of capabilities in networked supply chains can increase the operational effectiveness of a firm in highly dynamic markets that are characterized with short lead-time requirements and a large variety of product and service components. Edwards, et al (2013) proposed in their study that lack of coordination in supply chains results in inefficiencies, duplications and an inability to adapt to change.

3. Hybrid Tools and Strategies

Having effective communication system can increase the operational effectiveness of a firm in highly dynamic markets. To achieve Collaboration in the supply chain requires rethinking the way your traditional communication process is managed to include both internally and externally coverage of the whole supply chain to improve the ways in which employees, customers, stakeholders and partners relate to each other. "supply chain management concerns the timely coordination of capabilities, i.e. technologies, processes, and other resources related to the flow of material, information, and funds within a company, but also externally between companies (Hakansson & Persson, 2004)" (Ogulin et al., 2012, p. 329).

"A short characteristic path length in information flows indicates that the supply chain is able to diffuse and circulate information rapidly throughout the entire system, which facilitates more efficient material and financial flows" (Edwards, et al., 2013, P.445). Members in the supply chain with their collective and collaborative efforts, sustain the progress of each other as well as the group. Collaboration between members requires effective communication (Chandra & Kumar, 2001).

Kelly (2000) in their study classified a number of barriers that affects the achievement of effective communication in organisations to include: interpersonal barriers and organisational barriers which come from an organisation's structures, systems, and processes. Any communication system consists of information source, message, information receiver and channel. The effectiveness of firms in originating, developing, and implementing communication process is viewed as a function of the above different communication system different elements. This study concentrates on the channel and the type of logistical tools and routing of communication system. When there is a lack of communication channels, it is difficult to get information from employee to manager, from manager to employee, from department to other, and from customer to supplier. Organisations need channels to transfer information about performance, goals and goal achievement, procedures and practices, and to nurture coordination and problem solving across the organisational borders (Kelly, 2000). Placing the Source and Recipient at either end of a communication process this study focuses on the organization in the middle with different strategies and tools to facilitate communication process.

Caldwell (1997) in his study say that supervisors need to concentrate on how to manage organizational communication and move from traditional structure and flow of information to the new era of unrestricted access to information and more open communication. Vercic and Zeffass (2016) say that excellent departments engage different people, they partner and collaborate more closely with the executive board and other departments in the organization, and they depend on different processes with more listening and research.

The researcher in this study proposes that communication processes needs to be based on both macro and micro level to achieve flow in different direction that includes:

- flow between individuals/groups within department
- flow between individuals/groups between departments
- flow between individuals/group between the firm and external organizations, suppliers and customers

The improvement of communication is in a close relation with the technical development of the tools and technologies that make it possible to communicate (Jankó, 2002). To achieve the above flow of information and knowledge, organizations need to use hybrid tools and techniques. Communication plan need to include the appropriate mix of online, face-to-face, and hard copy instruments to optimize the opportunities to share information with those you most need to reach (McCauley, 2010).

Jankó (2002) say that depending on the make-up of the objective group we frame our messages differently and perhaps we choose a different channel to that message. Braun (2013) considered two ways to understand communication channels. A social approach were the differences between channels are driven by worker perceptions and objective approach that takes a researcher-centric perspective and suggests that there is variability of features between, but not within, channels. Flaherty et al. (1998) say that "interpersonal motives influence communication patterns and choice of communication partners (Graham, Barbato, & Perse, 1993) as

well as channel choice (Perse & Courtright, 1993)". As per Cortesi (2001) who studied the effect of using different channels (Audio, video and face to face) on (Composition, participation and performance). Some of the results reported that participation and performance are highly dependent on channel. Group members participated more often in face-to-face meeting. Groups engaged in idea generation tasks produced more ideas using face-to-face communications as compared to videoconferencing or audioconferencing. Groups included larger existence of participants from higher organizational levels in audioconferencing relative to the other two channels. Another study provides a new understanding of how face-to-face interactions and facial expressiveness impact individual choice for communication Liu (2010). Caldwell (1997) in his study revealed that individuals are not altering from the classic chain-of-command and was very traditional in their communication patterns. Further added that email may be considered easier and/or faster in communicating throughout the organization, employees do not feel that they can communicate openly and honestly via email. Bargh and McKenna say that several scholars have contended that Internet communication is poor and sterile form of social exchange paralleled to traditional face-to face exchanges, and will therefore produce negative outcomes.

While Olund (2012) research findings indicated that the advantages of mobile technology use are greater than disadvantages. Mobile technology is necessary for communication and affects worker-leader relations by increasing availability, flexibility and facilitating rapid work coordination. IT appropriability and IT advancement play a distinctive role in enhancing supply chain capabilities and firm market performance (Kim, 2003). The frequency, diversity and formality of Internet communication played an important role in determining the level of purchasing performance Cai (2006). Technology nowadays is used widely to facilitate communication for its ability to help information flow horizontally among service delivery sites, departments, and groups as well as vertically up and down the chain of command. Add to that technology can help crossing organizational boundaries by flowing to and from other organizations, stakeholders and customers.

Advanced information technology (IT) changes the way organizations manage cross-border supply chains as an example Ruey-Jer et. al. (2008) say that Dell computer effectively employs IT in its global operations by means of a virtually integrated value chain with customers, distributors and suppliers. Turban et. al. say that there are three sets of technologies to be used in a knowledge management system: (2001: P.406):

1. Communication technologies that allow users to access needed knowledge, and to communicate with each other –especially with experts.
2. Collaboration technologies that provide the means to perform group work. Groups can work on the same documents at the same time (synchronous) or at different times (asynchronous); in the same place or at different places.
3. Storage technologies originally meant using a database management system to store and manage knowledge.

In recent years, there has been increasing amount of research on advantages and disadvantages of face to face communication and technology use or what as Braun (2013) described in his study using the term "computer-mediated communication" which is a blanket word used to describe multiple methods of communication that occur over computer-based devices. Some organizations encouraged the use of technology while others preferred face to face communication. Technology use to be successful Ruey-Jer et al. (2008) say there is a need to develop sufficient and appropriate IT capabilities to fit the external environment need, organization can effectively leverage IT capabilities to reinforce their channel processes and capabilities in international market, in turn, earn desired benefits.

Ogulin et al. (2012) Say that "process coordination of capabilities across organizational boundaries can contribute to cost-savings (Hewitt, 1994), standardization of services (Davenport, 2005), and faster total supply chain response times (Sydow and Staber, 2002)". Organizational communication is critical to effective management of an organization's purchasing practices, supplier- customer operations and strategic alliances, dealing with processes requirement and ensuring smoothly production, etc. Clearly, the organization makes the communication not only between its organizational departments or inside these departments, but also between them and the external environment. To achieve the above requires the use of hybrid tools where the advantage of one can offset the disadvantage of the other. Kelly (2000) says that the tasks people perform will affect who talks to whom, the urgency and speed of messages, and what information people need to share. Choosing a channel that is not proper to the message can lead to a failure in communication. For example, emotional or complex messages are usually most effectively communicated face-to-face.

Cai et al say that traditionally, organizations communicate through media such as mail, telephone, fax and face-to-face meetings. However, with the volatile growth of the Internet a variety of Internet technologies, ranging from simple communication applications, like e-mail, to more advanced tools, like extranets, have been

embraced by numerous businesses for meeting their intra- and interfirm communication needs. Kelly (2000) says that there are many ways to improve upward communication (e.g. suggestion systems, performance reports, attitude surveys), downward communication (e.g., videos, newsletters, briefings and meetings) and horizontal communication (e.g. electronic networks and intranets, and quality circles).

Different organizations adopt different strategies for communication and information exchange. Some firms favoured formal communication while others supported informal collaboration. Both informal and formal coordination mechanisms is needed to improve supply chain performance. In this uncertain and turbulent environment, many organizational strategies are emphasizing the shift from approaches based upon power, formal and hierarchical dependence and confrontation towards those that imply greater collaboration and partnership. Park et al say that to accomplish supply chain management activities that includes all transportation, storage, and information processing from the raw material stage to the point where the product reaches the final consumer, then cooperation and partnership is a must. Ogulin et al. (2012) in their findings suggest that in this dynamic market companies should build informal coordination capabilities in-order to take advantage of time-sensitive market opportunities. Further added that the management of industry guidelines, regulation, connectivity, and relation alignment are significant antecedents for informal coordination of supply chain capabilities in business networks. In strategic alliances and partnership in supply chain, Myhr and Spekman (2005) emphasized the use of both electronically mediated exchange and face to face interactions that are essential for trust to build.

“Supply chain visibility has been viewed as the degree to which supply chain partners have access to information related to supply chain operations and management and considered to benefit each other (Mohr & Spekman, 1994; Barratt & Oke, 2007)” (Wei and Wang, 2010, P.239). Xu and Beamon (2006) emphasized the use of coordination mechanism as a set of methods used to manage interdependence between organizations. It is found that more than one coordination mechanism should be implemented for a given organization or a given interdependency, particularly in situations in which one or more attributes do not fit squarely within a single category. Given the increasing demand for a high quality, rapid response flexible supply chain, and the importance of communication to achieve that, the challenge of organization is to design and select the appropriate strategies and communication tools. Communication Within supply chain cannot be over-emphasized. Information exchange and coordination of activities, from procurement to production, up to distribution can be improved using Internet, improved information systems, face to face communication and the use of different hybrid strategies and tools.

4. Conclusion

When there is lack of formal communication tools and channels, it is difficult to exchange information between individuals/groups within department, between individuals/groups between departments and between individuals/group between the firm and external organizations, suppliers and customers. And as communication is considered one of the key levers to supply chain success lack of proper channels will directly affect supply chain performance. While traditional communication approaches improved supply chain performance, in this dynamic environment there are still significant gaps and few opportunities to innovate the communication process within the whole supply chain.

5. Future Direction

This study contributes to communication process in the supply chain by going beyond the benefits and problems of communication process that occur in day-to-day operational communications. It adds a new perspective to fit the flexibility and agility exist in the market place by proposing the use of hybrid strategies and tools to improve connectivity, information exchange, knowledge sharing and relationship alignment in the networked supply chain. Therefore, the researcher recommends further study to test, refine and fully appreciate the breadth of application of this proposed new perspective to improve communication process.

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