

Supplier involvement in apparel innovation: How it works

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Abstract

Supplier involvement is considered as one of the best practices and that should be a part of the product development strategy to assure successful product innovation to add value to new products. Though the literature reports various propositions on supplier involvement, in general in product innovation, yet little is known regarding how it works in apparel context. Thus, the main focus of this paper is to explore the type of relationships that exist with the suppliers in the context of apparel product innovation.

A qualitative case study research approach was applied taking into account three different product categories produced and marketed by the Sri Lankan apparel manufacturers.

The findings highlighted that most of the suppliers are fully capable of maintaining the trust, commitment and flexibility throughout the process and their capabilities have emerged as key points. The suppliers are involved and act as facilitators/ co- developers in the early phase of the innovation process. The involvement of the suppliers is anticipated even at the latter part of the process, but with no influence for the decision making in the innovation process.

Keywords: supplier involvement, product innovation, innovation process, apparel

1. INTRODUCTION

Globalization as well as the growth of technologies has created radical changes in the modern business world over the past few decades (Cousins, et al., 2008;Rane&Mantha, 2008).As a result, the customers have become increasingly more sophisticated by demanding for more choices;they also have more marked preferences and greater needs(Kahn &Lodhi, 2010)forcing firms to become more competitive. For fulfilling all these requirements, innovation has been identified as one of the most effective competitive strategies in an ever changing business environment. In order to differentiate the products, dominate the market and to increase the firm's market share, product innovation and development of new products have been identified as the most effective strategies for an organization (Kahn & Lodhi, 2010; Wangbenmad & Rashid, 2014).The capacity to continually generate innovative products is recognized as one of the most critical capabilities that firms need to maintain in order to secure a sustainable competitive advantage.(Kim, et al.,2015)

The importance of developing relationships with external sources along the supply chain has been recognized to facilitate and sustain innovation.Accordingly, suppliers have received more attention as potential external actors who can work together in internal activities along the innovation process. Nieto and Santamaria(2007)conclude that suppliers are the single partners who make the most impact on the achievement of product innovations with varying degree of novelty. Many researchers have considered supplier involvement as one of the best practices that should form part of the product development strategy for successful product innovation, as this would help to create and facilitate an atmosphere of working together and make better use of a supplier's capabilities to add increased value to new products (Rane & Mantha, 2008; Wangbenmad & Rashid, 2014;Wynstra, et al., 2001). Supplier involvement can be defined as,

“the resources (capabilities, information, knowledge and ideas) that suppliers provide, the tasks they carry out and the responsibilities they assume regarding the development of a part, process or service for the benefit of a current or future buyer's product development project.”(Carr & Pearson,2002)

The form of the supplier's responsibilities or the level of involvement may vary with the extent of collaboration in innovation process. Different scholars have suggested different segmentations or typologies of supplier involvement. Dyer, et al.(1998) suggest three categories: short-term arm's length relationships, durable arm's length relationships, and strategic partnerships. In short term arm's length relationships, manufacturers are minimally dependent on suppliers whereas in durable arm's length relationships there is a longer time frame for the dependency. The supplier's role can in one extreme be limited in the innovation process merely delivering materials or components. However, the suppliers' role has changed to provision or exchanging of design information, knowledge and ideas, minor design suggestions and simple consultation regarding the current or changing business environment (Achillas, 2014; Petersen et al., 2003; Ragatz, et al., 1997; Wagner, 2008). Moreover, in the open innovation paradigm, the suppliers may be fully responsible for the complete development, design, and engineering of specific components or products (Achillas, et al., 2014; Petersen, et al., 2003; Ragatz et al., 1997; Wagner, 2008; Wynstra, et al., 2001). In a strong partnership, increased sharing of information, intense coordination and trust as relationship-governance principle and dedicated or relation-specific assets are expected. Petersen, et al.(2005) promoted mainly four basic forms of supplier involvement in product innovation; none, the white-box, grey-box and black-box approaches. The supplier is not involved at all in the design process in category one. It is expected that the supplier works as a consultant, supporting the development engineers in the white box approach. In the grey box integration, a joint development effort, sharing of technology and making joint decisions regarding design specifications occur between the buyer and the supplier. In black box integration the design is primarily supplier driven and the supplier having informed of the design specifications takes full responsibility for the design process (Petersen et al, 2005).

According to Yahan (2010), the question regarding the timing of supplier involvement in the product innovation is an important factor. Dowst(1988) outlined nine areas in which suppliers can be involved in the buyer's design process. Handfield, et al.(1999) identified five phases in which the suppliers can be basically integrated into the product innovation process. However, Brown and Eisenhardt (1995) explain that it is not straight forward as to exactly how or when it is appropriate to involve suppliers in the development process.

Though the literature proposes various opinions on supplier involvement on product innovation, little is known yet regarding how it applies in the context of apparel. Thus, the main focus of this paper is to study how suppliers get involved in the apparel product innovation process. It is expected to explore the following research questions:

- What type of relationship exists between the suppliers and manufacturing organizations engaged in apparel product innovation?
- How does the relationship work along the innovation process?

2. METHODOLOGY

In order to study the relationship between the suppliers and the manufacturing organizations in apparel product innovation, a qualitative case study research approach was identified as more suitable and appropriate since it gives an opportunity to explore the real life interactions and make propositions/ conclusions on the nature of supplier relationships in apparel product innovation. The apparel manufacturers those who engage in complete product innovation process were considered for the study. Following the principles of the purposive sampling method, three different product categories produced and marketed by the Sri Lankan apparel

manufacturers were selected as the cases to be studied. The selected manufacturers for the case study are as follows:

1. Manufacturer A- is a leading men's shirt manufacturer. The company has been first started as a shirt manufacturer, and then moved onto apparel design mainly targeting the local market.
2. Manufacturer B –is one of the leaders in local denim wear market for both men and women. They also design and manufacture denim garments for the international market.
3. ManufacturerC –is a company design and manufacture blouses, skirts, tops, dresses and pants. Their customer base is mainly European.

The data was mainly collected by means of in- depth semi-structured interviews on set themes. The participants are selected at the organizational level based on a set criteria. The selected participant should senior management positions and are actively involved in and interacted with suppliers in different phases of the innovation process. Accordingly, in each case, the Company, Directors, Chief Executive Officers ,Innovation Managers, Product design/ development Managers, Marketing Managers, Sourcing/merchandising Managers, Manufacturing (operations) Managers were invited for the interviews. The voice recorded 15 interviews were transcribed with the use of the NVivo software., The principles of template/ thematic analysis (King, 2004) were adopted in the analysis of data to identify the emerging themes/ ideas.

3. RESULT ANALYSIS

This study was focused to explore the type of relationship that exists with the suppliers and how it works in a real product innovation context in the apparel manufacturing industry. The findings are analyzed qualitatively and presented in line with the order of the research questions.

3.1. Relationship with suppliers in apparel product innovation

Relationship with suppliers enables firms to better manage the smooth and efficient flow of products through the supply chain (Schoenherr & Swink, 2012) . Maintaining relationship with suppliers is also an essential business strategy in apparel innovation since it may be beneficial to try new technologies, materials and techniques to expand new product categories and markets effectively incorporating the knowledge.

3.1.1 Supplier selection

It is acknowledged that well-chosen suppliers have a positive influence on the decision-making process (Petersen, et al., 2005). It is revealed that the suppliers are selected based on factors: quality, price, on-time delivery, flexibility and commitment in all three selected apparel manufacturing companies of the case study. Besides, the supplier's operational capability and capacity is one of the main concerns of apparel manufacturers when selecting the supplier.

3.1.2 Relationship with suppliers

Long-term relationships are considered as beneficial to both buyers and suppliers in partnerships (Lettice, et al., 2009). It is found that most suppliers of all three companies have developed good long term relationships with the apparel manufacturers and they worked together. All three companies admitted that most suppliers have worked with them from the inception of the company which facilitated the building of good mutual understanding between the apparel manufacturers and suppliers.

Manufacturer A- *“last 30 years that is been the way. So we have a very good relationship with the suppliers. Whatever we say verbally we have gone by that.”* (Merchandising Manager)

Manufacturer B- *“these particular suppliers basically fabric suppliers, have kept us in continuous business.”* (Merchandising Manager)

Manufacturer C- *“there are few mills; we have been working for a long time for fabrics.”* (Director)

3.1.3 Relationship attributes

The four relationship attributes; trust, commitment, flexibility and mutual learning / open to share information are considered as important qualitative attributes for an effective relationship (Chen & Fung ,2013; Edelenbos & Klijn, 2007; Gieskes, 2002; Morgan & Hunt, 1994). These four attributes were carefully evaluated in this study.

3.1.3.1 Trust and commitment

Trust is known to be one of the important qualitative attributes and a necessary factor for successful inter-firm relationships (Morgan & Hunt, 1994; Edelenbos & Klijn, 2007). The data of three companies highlight that most of the suppliers are fully competent in maintaining the trust and commitment throughout the process. The trust and commitment of the suppliers seem to be important for the manufacturer A, B & C not only to maintain their relationship but also to facilitate company performance in the following areas:

- ✓ be on time to the market with delivery speed
- ✓ enhance customer satisfaction with good quality products, competitive price and new developments
- ✓ realize the company vision

3.1.3.2 Flexibility

Chen and Fung(2013) claimed flexibility as a key component of the operational relational exchange needed to respond to changing environments. The findings of the three companies highlight that both suppliers and apparel manufacturers are flexible in terms of price, quantity for experiments with amendments and product specifications. However, only Manufacturer A admitted that some suppliers are not flexible enough on the quantities for experiments though they are working with them for a long time.

3.1.3.3 Mutual learning / open to share information

Product innovation process can be viewed as a learning process by nature, since it has a primary role in generating new knowledge and disseminating that knowledge throughout the organization(Gieskes, 2002). In order to achieve competitive success in the apparel sector, mutual learning by sharing information among the stakeholders must be considered as an essential element. This study revealed that most of the suppliers are willing to share and provide information, knowledge and ideas and are open to the suggestions of the apparel manufacturers.

Manufacturer A - *“they are willing to share their knowledge. If the industry comes up with new technology, they keep on posting us and updating us on new developments; it’s like a partnership for progress.”* (Merchandising Manager)

Manufacturer B - *“they are giving their options; they are coming with new developments. They are suggesting the possible washes depend on the weight of the fabrics.”* (CEO)

Manufacturer C - *“they also do the market research, trends and they also try to do new things, and they are coming with their options. We can also ask new things and they are positive with our requests.”* (Director)

The findings of the relationship with suppliers in product innovation in the Sri Lankan apparel industry can be summarized as shown in Table 1.

Table 1- The relationship that exists with suppliers in apparel product innovation

Findings		Manufacturer A	Manufacturer B	Manufacturer C
Relationship	Long-term and good	Almost 30 years	Worked with them for the last 6 years	Most of the suppliers are there from the inception (from 1991) of the company.
Relationship attributes	Trust	Suppliers are fully competent in maintaining the trust and commitment throughout the process.		
	Commitment			
	Flexibility	Some suppliers are not flexible enough on minimum order quantities	Most of the suppliers are flexible enough during the process	
	Mutual learning / open to share information	Most of the suppliers are willing to share knowledge, ideas, information		

However, it was noticed that the companies are trying out new strategies to work closely with their suppliers, since they have realized that close collaboration promotes more effective innovation.

3.1 How the relationship works along the apparel innovation process

The innovation process consists of various phases, activity stages and decision points. For this study, a simplified approach for innovation (Tiwari, 2008), which comprises three basic phases; conception, implementation and marketing, was chosen and elaborated. The stages involved in each phase were used to discuss the involvement of suppliers in apparel product innovation.

The opportunity identification and idea exploration stages can be considered as the initial stage of the conception phase of the innovation process. Implementation phase consists of the two stages; the detailed development and product development. The final marketing phase of the innovation process comprises pre-planning and production stages (Tiwari, 2008).

3.2.1 Involvement in conception phase

The findings by interviewing the three companies highlight the fact that the suppliers are invited at the beginning of the product innovation process. In the opportunity identification stage, suppliers are invited to participate in the process as facilitators/ co-developers providing information on their new findings, developments and market directions together with their potential. The communication occurs in a variety of media such as documents, samples and/or meetings and visits. It can be assumed that the manufacturer wants to acquire relevant expertise and capability in relation to raw materials. However, it was noted that the suppliers are not involved and do not influence in the decision making of the apparel manufacturer.

Basically, the fabric suppliers are involved as facilitators / co- developers at the idea exploration stage of all three companies offering fabric samples for experiments on compositions, design, washing, dyeing, etc. It was noticed that at this stage, the apparel manufacturers experiment on manufacturability, mockups, wash and dye processes, embellishments, compositions and specifications of the fabrics. It seems that both parties, suppliers and apparel manufacturers use mainly e-mails, phones, documents and meetings (on Skype or otherwise) where possible to exchange their ideas, specify their requirements and discuss possibilities of achieving the requested standards and to explore alternatives with due consideration about costs. The communication can be formal or informal. It can be assumed that it mainly depends on the trust and mutual understanding existing between the supplier and manufacturer. After consulting the suppliers, the apparel manufacturers decide to proceed with the initial idea further or revise the idea or store it for future reference. At this point, the suppliers are not directly influencing the decisions of the manufacturer.

3.2.2 Involvement in implementation phase

The findings in all three cases show that the suppliers are involved more deeply in the second phase (implementation) of the innovation process, the detailed development and product development. During detailed development for mockups and further experiments, the raw materials are requested from suppliers. The materials need to be requested for developing prototypes at the product development stage. It was revealed that the detailed development and product development activities may be repeated several times until a satisfactory quality standard is achieved. Hence, the good relationship with suppliers seems to be beneficial at this phase. The data shows that the manufacturer needs to maintain regular communication with suppliers. Through these stages, the suppliers also need to experiment concurrently to verify the manufacturability of the requested materials utilizing their capabilities.

3.2.3 Involvement in marketing phase

The findings highlight that the involvement of the suppliers is anticipated at the pre-planning stage as well as at the production stage, which is considered under the third phase of the innovation process. The actual production takes place during this phase. In these two stages, the supply of raw materials to the required quality specifications and other requirements (quantity, price, delivery dates) is expected to be fulfilled by the suppliers. Minimal communication exists at these two stages in comparison to other phases of the innovation process.

The findings of the supplier involvement in product innovation in the Sri Lankan apparel are summarized in Table 2.

Table 2- Supplier involvement in apparel product innovation

Findings			Company A	Company B	Company C
Involvement in product innovation process	Phase 1 (conception)	Opportunity identification	Provide information on their new findings, developments and market directions via samples, documents, meetings		
		Idea exploration	Provide samples for experiments on compositions and design,	Samples for experiments on compositions, washing, dyeing,	Samples for experiments on compositions, design, washing, dyeing,
	Phase 2 (implementation)	Detailed development	Materials for mockups and prototypes as requested by the company (carry out own experiments for the developments)		
		Product development			
	Phase 3 (marketing)	Pre-planning	Agreements on quantity, price, delivery dates		
		Production	Supply of raw materials to required quality specifications and the other requirements to be fulfilled		
Decision making along the process			No direct involvement or influence on decision making by the suppliers		

4. CONCLUSION

This study is to identify the supplier – manufacturer relationship in the apparel product innovation. It was noted that the Sri Lankan apparel manufacturers are working with very few local suppliers and most happen to be overseas suppliers.

It was exposed that the supplier – manufacturer relationship in the Sri Lankan apparel product innovation exists mainly based on not only trust, commitment, mutual learning and good track records such as quality, price and on-time delivery but also suppliers’ operational capability and some degree of flexibility. The suppliers have developed and maintained good long term relationships and communication which facilitates the building of good mutual understanding between the manufacturers and suppliers.

The findings of the supplier involvement in product innovation and the influential attributes for the relationship in the Sri Lankan apparel industry are presented in Figure 1.

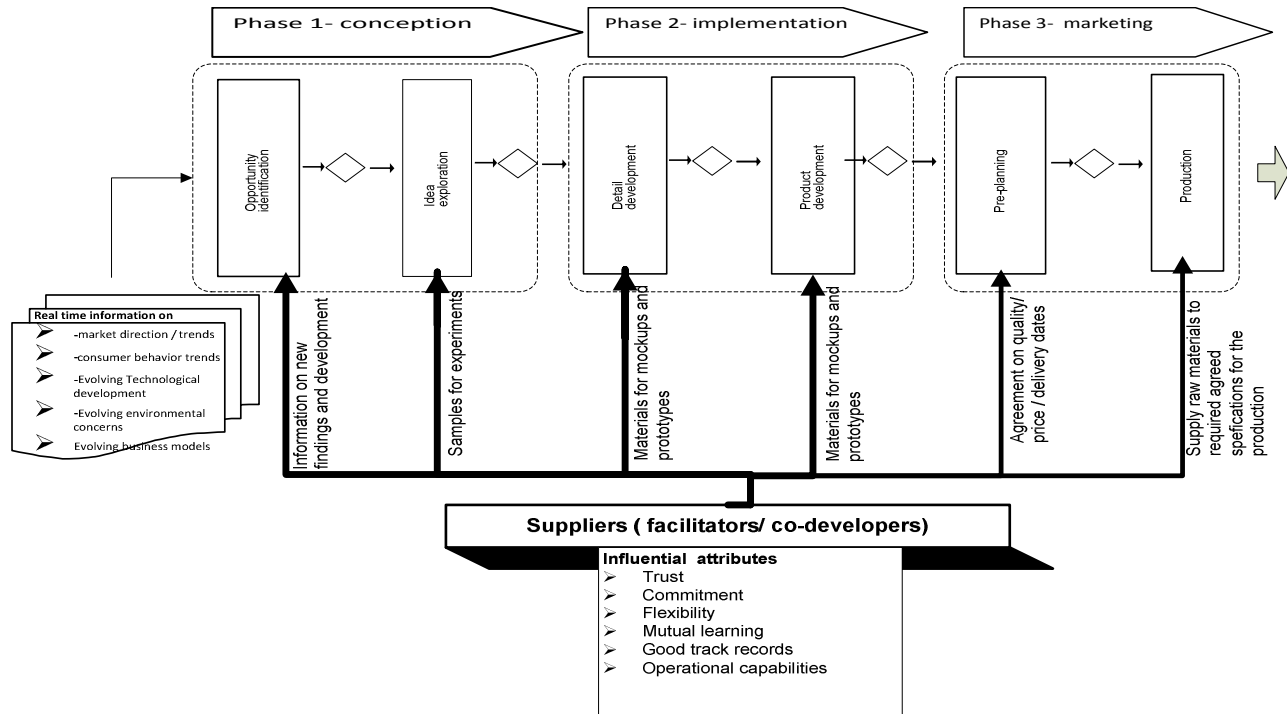


Fig 1- Supplier involvement in apparel innovation process and the influential attributes for the relationship

Most of the suppliers act as facilitators/ co- developers in the innovation process together with their potential resources providing information on their new findings, developments/ experiments and market directions. For each phase, stage and decision gate of the innovation process, it was observed that some suppliers work as facilitators and some as co- developers based on their operational capabilities.

It was revealed that the suppliers are involved mainly in two phases of the initial innovation; conception and implementation phase. The manufacturer seems to maintain regular communication with suppliers and the suppliers also experiment concurrently to verify the manufacturability of the requested materials by utilizing their capabilities. Minimal communication exists at the final phase where the involvement of the suppliers is anticipated in comparison to other phases in the Sri Lankan apparel innovation process. However, it was noted that the suppliers are not involved and do not influence the decision making of the apparel manufacturer throughout the innovation process.

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