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SUPPLIER DEVELOPMENT AND BUYER-SUPPLIER RELATIONSHIP STRATEGIES – A LITERATURE REVIEW

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Abstract

Academic and corporate interest in supplier development and buyer-supplier relationship has increased substantially in recent years. This paper provides a framework for analyzing the current understanding of supplier development strategies, its impact on performance, and buyer-supplier relationship approaches. There is an increased need for buyers and suppliers to strategically collaborate to build a stronger and long-term relationship. The goal is to get extended understanding in buyer-supplier relationship and supplier development strategies. Supplier development is a process of understanding including four steps 1) supplier assessment, 2) competitive pressure, 3) supplier incentives, and 4) direct involvement. Future research can be more empirical focused including multiple case study in global environment to validate the supplier development strategy approaches and help the organization to develop their supplier's strategies. The presented literature review offers supplier development strategies for empirical case studies and a systematic way to build buyer-supplier relationships to improve the performance.

Keywords: Supplier management, Supplier policies and procedures, buyer-supplier relationship, supply chain management, Supplier development

1. INTRODUCTION

Supplier development was used by Leenders (1996) first to explain the determination by manufacturers to enhance the supplier's numbers and to improve their performance (Leenders 1966). After that, researchers in supply chain management started a discussion of supplier development. In the same time, organizational theorists began discussion of complex-product businesses that incline to be considered as high degree of mutual interdependence of transitional module makers and ultimate assemblers (Pfeffer, Salancik 1978, THOMPSON J.D. 1967).

One of the supplier development literature part states and explains the actions before supplier development concept takes place called "the antecedents" (Krause 1999). He identifies that 1) organizations need to manage their suppliers strategically for the competitive market, 2) buying firms need to take a strategic viewpoint for suppliers, consider the purchasing function as a significant source for competitive advantage, and make investments in development of suppliers' performance and capabilities, 3) to increase the supplier commitments, buying firms need to consider their suppliers as virtual extensions that helps to motivate them to improve their performance, 4) a relationship between buyer and suppliers identifies the opportunity to invest into the supplier development programs, and 5) Communication and information sharing between buyer and suppliers is an important prerequisite to supplier development activities (Krause 1999).

Moreover, Supplier performances and capabilities have significant existence and play a pivotal role maintaining the manufacturing firms' competitive advantage (Humphreys, Shiu & Chan 2001, Krause 1997, Watts, Hahn 1993). Supplier development may include goal setting, supplier evaluation, performance measurement, supplier training, and other related activities (Krause, Handfield & Tyler 2007). Supplier development approaches could be summarized into table 1.

-----Table 1 approximately here-----

The term 'suppliers' has become a substantial party who are not only suppliers of goods these days but they have become strategic partners for the firm which represents the importance of their role in the value chain (Kwon et al., 2010). Supplier relationship management or buyer-supplier relationship in a global supply environment is the concepts of management network that involves different skills and knowledge into the field and enhance the possibility of performance (Lintukangas, 2011). Therefore, the relationship between buyer and supplier provide a pivotal prospect for firms to develop strategically global competitive advantage. These relationships have developed to the level of strategic partnership relationship rather competitive (Sanchez Loppacher et al., 2011). There are some success factors which influence supplier development including 1) effective communication, 2) an attitude of partnership, 3) mutual commitment, and 4) top management support. These factors really define the aspect of supplier development and its success which ultimately is a resource to develop buyer-supplier relationship and continuous performance improvement through competitive advantage (Sucky & Durst 2013).

The process of supplier development is a dimension of supplier development research. For the purpose, Hartley and Choi (1996) suggest a process model which consists of five factors. These five factors are; 1) supplier's team leadership, 2) supplier's top management commitment, 3) capable joint-development team, 4) data driven changes, and 5) success of a model line. Previous studies state that buying firms can communicate more efficiently with suppliers if they put efforts in supplier development including supplier evaluation, supplier training, and supplier award programs (Krause, Ellram 1997b). Furthermore, they perceive their suppliers as partners and place a better emphasis on some serious issues (Krause, Ellram 1997a). Buying firm's tendency to engage in supplier development was affected by its perception of supplier obligation, its anticipation of relationship endurance and operative buyer-supplier communication (Krause 1999). In the following, there are factors to increase supplier's performance and competences and infrastructure factors of supplier development (Humphreys, Li & Chan 2004).

-----Table 2 approximately here-----

More specifically, the determinations of the systematic review are to highlight the supplier development strategies, and buyer-supplier relationships to meet the short and long term supply needs with the help of detailed and updated literature. This will lead to examine the impact of supplier development on buyer-supplier performance and will provide a research framework to identify the step by step process of supplier development

and improved buyer-supplier relationships. Moreover, this study explores the examples and literature on supplier development strategies and relationships to identify areas for future research to provide a platform based on the detailed literature review (Krause, Handfield, & Scannell, 1998; Krause, 1997, 1999; Giunipero, 1990).

The idea of this study is significantly objective which clarifies the supplier development strategies and approaches, their impacts, and developing buyer-supplier relationships. Thus, this important study collaborates and combines the framework of supplier development approaches which lead to develop a strong relationship and provide the answers to the following research question of the study:

What approaches support to develop suppliers' performance to improve buyer-supplier relationships?

The main question of the study can be divided into the following sub-questions:

1. *What are the significant supplier development approaches in the literature which help buyers to improve the performance of suppliers?*
2. *How buyer-supplier relationships can be developed to highlight and to provide the important factors in the relationships for empirical examination?*
3. *Finally, how to combine supplier development strategies with buyer-supplier relationship framework to answer empirical questions?*

This research identifies and addresses above mentioned questions by investigating a link between different strategies of supplier development and buyer-supplier relationships performance outcomes.

The following section reviews the research methodology used in this research paper. Based on this review and methodology, a detail literature review is presented in Section 3. Section 4 presents research framework based on the literature. Discussion/conclusion, future research perspectives/implications are discussed in Section 5 and Section 6 respectively.

2. RESEARCH METHODOLOGY

A literature review is a critical summary and assessment of the range of existing materials dealing with knowledge and understanding. The purpose is to discover the research project, to customize its context or background, and to provide insights into previous work (Blaxter, Hughes & Tight 2010). One of the critical primary responsibilities of a researcher is to find out and analyze the existing literature concerns to a research topic.(Kumar 2011) It consists of a comprehensive research through a variety of resources such as books, journals, electronic journals, and abstracts. According to Kumar (1996), a literature review has three functions. First, it explains and emphasis the research question helping researcher to understand the subject area completely and different theoretical approaches applied previously. Secondly, it may develop the methodology. Literature review helps researcher to observe the other investigators' approach to study the chosen phenomena and validity of methodologies. Third, a literature review helps to expand the researcher's knowledge of the area and provide a better command of the chosen area and relevant issues. The greater understanding on existing research area reinforces the validity and findings. (Rudestam, Newton & Newton 2007)

This research paper follows the ideologies for systematic literature review proposed by Tranfield, Denyer, and Smart (2003) to ensure the consistency and significance to the practice. In this study, a literature review was employed as the research methodologies to develop a supply chain strategy framework. The literature on supply chain strategies was composed primary from journals in the areas of strategic management, supply chain management, operations research and operations management. The target was to focus on latest journals from last decade and that's why dissertations, textbooks, unpublished working papers, and conference papers were excluded. The literature search incorporated journals published by numerous publishers and research was done using Scopus which is one of the largest abstract and citation database of research literature. Several hundreds of journal articles were found and that's why the research has to focus the most relevant, cited and newest journals.

3. SUPPLIER DEVELOPMENT

3.1 Supplier development strategies

Hahn et al. (1990) proposed a theoretical model for supplier development and document industry practice (Hahn, Watts & Kim 1990). Krause et al. (2000) characterize following useful supplier development strategies:

Competitive pressure: Multiple suppliers are more important to develop competitive pressure which help and motivate other suppliers to enhance quality and maintain improved performance (Tezuka 1997).

Evaluation and certification systems: Supplier evaluation and certification system ensures the suppliers' performance and organization's expectation of performance. It motivates suppliers to improve performance consecutively (Krause, Scannell & Calantone 2000, Carr, Pearson 1999).

Incentives: Buying firm can offer incentives to motivate suppliers to develop their performance and capabilities which include achieved cost savings sharing, increased volumes consideration, future aspects for business, and recognizing them through awards (Monczka, Trent & Callahan 1993, Krause, Handfield & Scannell 1998).

Direct involvement: Organizations follow a pre-emptive method to develop suppliers' performance through direct involvement (Krause, Scannell & Calantone 2000, Monczka, Trent & Callahan 1993). Direct involvement can be investments in operations or manufacturers can acquire supplier firm (Dyer 1996).

According to Krause (1998), buying firms follow an evolutionary path to develop suppliers' performance. In the adoption of TQM, respondents specified that they had implemented many or all of the TQM involvements i.e. focus on customer requirements, supplier partnerships, cross-functional teams, use of scientific methods for performance measurement, and use of quality tools. Moreover, external suppliers focus helps companies to conduct a thorough supply base evaluation of acknowledgment to develop material quality, lower development costs, reduce purchase prices, and improve supplier responsiveness. After the supply base evaluation, organizations emphasis on amalgamation of purchased volumes with fewer suppliers to remove the suppliers' incapability of meeting expectations. To further improve the performance and capabilities of their supply bases, respondent firms engaged in supplier development (Krause, Handfield & Scannell 1998).

-----Figure 1 approximately here-----

Krause (1998) presents reactive and strategic supplier development approaches. In the strategic supplier development, initiatives are typically carried out by an executive-level team, with an execution plan being articulated and carried out by a cross-functional commodity team. In this way, reactive firms were not efficient enough in supplier performance assessment and further they recognized as candidates for supplier development only after a problem actually occurred. Table 3 explains some of the major differences between strategic (systematic) and reactive (remedial) approaches to supplier development (Krause, Handfield & Scannell 1998).

-----Table 3 approximately here-----

Krause (1998) present a generic process model for supplier development including ten steps to make systematic supplier development in process oriented way. It includes critical commodities for development, identify critical suppliers for development, form cross-functional commodity team, initiate communication with suppliers management, identify critical performance areas for improvement to gain competitive advantage, identify opportunities and probability for improvement, develop agreements on improvements, provide joint resources as required and implement supplier development effort, rewards and recognition and finally systematically institute on-going continuous improvement (Krause, Handfield & Scannell 1998).

-----Figure 2 approximately here-----

3.2 The impact of supplier development on buyer–supplier performance and relationship

Supplier development activities can be categorized into transaction-specific and organizational structure of supplier development. The factors of supplier development infrastructure affect the performance of buyers and suppliers (Humphreys 2004). In this vein, transaction-specific supplier development is the basic practice for buying organizations to develop suppliers' performance and capabilities (Krause 1999). Moreover, supplier development includes direct investment in assets focused to buyer and supplier perspective and training with transaction-specific knowledge (Joshi, Stump 1999). Krause (1999) explains that buyer's direct involvement to develop suppliers' performance is a key approach for the development and improved quality performance.

The clarity of long-term strategic goals determines the effectiveness of supplier development. Supplier development efforts should focus on future capabilities in technology and product development rather than on current quality and cost (Watts, Hahn 1993). Effective communication plays a key role between buyers and suppliers to motivate them (Newman, Rhee 1990, Giunipero 1990); it enhances the mutual understanding of both parties and reassures the conflict resolution (Spekman 1988). A long term commitment of buying firm assures a relationship with suppliers where suppliers willingly can make changes in their operations to fulfill the requirements of buyer (Lascelles, Dale 1989). Supplier evaluation is another important strategy to improve buyer-supplier performance. For the purpose, buyers should select suppliers carefully and evaluate them regularly. Supplier evaluation results could provide valuable information about general areas of weakness where performance improvements were needed. When suppliers follow further developments of its performance and capability by itself to improve competence, a rational and tactical match come into exist between buyer and supplier management which increases possibilities of success in the cooperation (Stuart, McCutcheon 1995). Trust between buyer and supplier is needed to improve the performance and capabilities of supplier and specially when they jointly investing into a business. Transaction-specific investments help to increase the buyer's reliance on the particular trading association and expose them to larger risk and uncertainty (Krause 1999). Buyers must safeguard themselves against the hazards of opportunism of suppliers. Buyer trust in the supplier would enhance the effect of buyer assets specificity on joint action in buyer-supplier relations (Humphreys, Li & Chan 2004).

According to Humphreys (2004) performance consequences are defined in various extents in the purchasing literature (Humphreys, Li & Chan 2004). Giunipero (1990) suggested that capability to handle suppliers' quality, delivery, and lead time, and also to control the acquisition cost has a significant dimension where purchasing function's efficiency can be measured. Watts and Hahn (1993) explained that supplier performance improvement indicator is most important factor to measure the result of supplier development. Moreover, Monczka (1993) stated the key objectives supplier development which a buying firm initiate to increase the competitive advantage of buyer and to improve the relationship between buyer and supplier (Monczka, Trent & Callahan 1993). In this vein, Humphreys (2004) presented three dimensions of supplier development outcomes i.e. 1) supplier performance, 2) buyer competitive advantage, and 3) buyer-supplier relationship improvement (Humphreys, Li & Chan 2004).

Furthermore, Hahn (1990) states that upgrading existing suppliers' performance and capabilities help in supplier development to fulfill the changing competitive requirements. Improvements in supplier performance focus on perception of buyers about the quality, delivery, cost, inventory, lead time, and the rate of new product introduction aspects. Further, linking a purchasing strategy with buying firm's overall corporate competitive strategy objectively develops the long-term relations and suppliers' performance and capabilities. Competitive advantage development of a buying firm should be one indicator of efficiency in supplier development (Hahn, Watts & Kim 1990). Thus, Stuart (1993) suggested that competitive advantage of buying firms includes market share gains, quality, cost reduction and quick product development. On the other hand, Heide and John (1990) noted that firms efficiently make alliances when there is some scope and possibility of joint activities. For the purpose, the performance results of buyers are mainly reliant on the performance outcomes of their suppliers. In manufacturing industries, buying firms have four key competitive priorities in their end markets i.e. cost, quality, delivery time and reliability, flexibility, and outcome of promise (Krause, Handfield & Tyler 2007).

Buying firms' development in the product cost is reliant partially on subcomponent suppliers' improvement that means it can be a reduction in rework, scrap, and downtimes. The benefits by reducing the supplier's cost should be partially transferred to the industrial customers in low prices form (Clark 1989, Human, Provan 1997, Turnbull, Oliver & Wilkinson 1992). In automotive and electronics industry, the manufacturer follow a low costs of their supplied inputs, lower in final assembly and to provide a competitive price to the consumers (MacDuffie 1995). Organizations have a key concern about the manufacturing flexibility to meet the changing needs of their customers but flexibility of assembler can be perceived to be a function of suppliers' quality, delivery time,

reliability, and flexibility (Krause, Handfield & Tyler 2007, Dyer 1996, Liker, Wu 2000, Meredith 2000, Womack, Jones & Roos 2007).

Performance improvements are often only possible required by buying firms when they make a long-term relationship commitment with their key suppliers (Krause, Handfield & Tyler 2007). Previous research suggests that suppliers will be reluctant to promise or commit a relationship specific investment if buying firms are unwilling to sustain long term relationships and mutual investments to improve suppliers' performance (Krause 1999). Moreover, suppliers consider relationship specific investments as susceptible to resourcefulness when commitments are not tangible or approaching from buying firms (Krause, Scannell & Calantone 2000). In this way, supplier development efforts from a buying firm for a purpose to develop the performance or capabilities are more significant to analyze the influence on the its performance and competitive strategy within the buyer-supplier relationship domain (Krause, Scannell & Calantone 2000, Krause, Handfield & Scannell 1998, Wagner 2006). For the purpose, Wagner (2009) stated that to understand the performance improvements in cost, quality and delivery and advantage from increased supplier capabilities, the buyers and suppliers need to jointly involve in relationship focused investments. They may also contribute resources for the development i.e. information sharing and investing in physical and human assets (Hunter, Beaumont & Sinclair 1996, Dyer, Nobeoka 2000).

Wagner (2009) highlighted the research gap in supplier development and explained that research has been lacking because of missing distinction in between supplier development objectives and performance achievements. The relatively less research does not clarify the various goals for supplier development efforts that can be affected on the relationship between buyers and suppliers. For the purpose, Wagner and Krause (2009) presented the important study of supplier development goals. They presented a study where the difference between goals which are short-term in nature and immediate (delivery, order cycle times, and quality) and long-term goals in nature (strengthening a supplier's managerial, product development, and processes competences) are highlighted (Wagner, Krause 2009). Further, supplier development goals will emphasize and focus on the measurable results of suppliers. On the other hand, a combined value creation needs much more efforts from buyers and suppliers; harmonized and combined capabilities, and a long-term focus on suppliers' performance and capabilities (Wagner, Krause 2009). Supplier evaluation and feedback may be the significant activities to develop suppliers while training them, by sharing and transferring employees from one to another, and some other related activities (Monczka, Trent & Callahan 1993, Wagner 2006).

Moreover, Terpend (2008) explained that empirical outcomes of studies propose the performance of a purchasing organization which is achieved through integration of buyer/supplier firms generally and specially by integration of product development, collaborative planning, and integration of information system (Ellram, Liu 2002, Frohlich, Westbrook 2002, Narasimhan, Kim 2002, Rosenzweig, Roth & Dean Jr. 2003, Droge, Jayaram & Vickery 2004, Petersen, Ragatz & Monczka 2005). Further, supplier development factors effect an organization financially i.e. it has effect on sales of buying company, return on equity (ROE), total return to shareholders, and net present value (NPV). Many studies explain that supplier development also has a significant impact on operational performance improvement i.e. cost, quality, and cycle time (Rosenzweig, Roth & Dean Jr. 2003, Tracey 2004, Petersen, Handfield & Ragatz 2005).

Park, Hartley and Wilson's (2001) propose that suppliers with maximum performance assessment have a strong impact on process development competences but those who emphasize conformance quality; they will not have strongest process development capability. In this vein, McGinnis and Vallopra (2001) established that a strong connection of purchasing function of buying firm assists supplier process development competencies and making sure supplier participation with high priority which is significant for the supplier development to improve performance and capabilities. Moreover, Krause and Scannell (2002) stated that product oriented organizations are more expectedly depend upon the encouragements, drives, motivations, direct connection, and participation than service based organizations. Further, operational factors like communication develops the performance of suppliers and play a key role in supplier development whereas collaborating and sharing information endorses reduction in cycle time and improve financial performance of buying firm and expand supplier's commitment (Rosenzweig, Roth & Dean Jr. 2003, Tracey 2004, Petersen, Handfield & Ragatz 2005).

-----Figure 3 approximately here-----

Liker (2004) presents a research on supplier relationships in automotive industries Toyota and Honda. He suggested that supplier relationships are followed by six distinct steps: First, they understand how their suppliers

work (supplier's business, works, capabilities and commitment). Secondly, they turn supplier rivalry into opportunity by (sourcing, compatible production and system, and setting up joint ventures). Third, they supervise their vendors by (monthly reports, constant feedback, and involving managers to solve problems). Fourth, they develop their suppliers' technical capabilities by (building up skills, a common lexicon, and innovation capabilities). Fifth, they share information intensively but selectively considering (specific time and place, rigid formats for sharing information in a structured fashion, and accurate data collection). Lastly, they conduct joint improvement activities (i.e. exchange best practices, initiate kaizen projects, and supplier study groups). Toyota and Honda have succeeded not because they use one or two of these elements but because they use all six together as a system (Liker, Choi 2004).

Prahinski (2004) presents that buyer-supplier relationship is the supplier's perception of the buying firm's behavioral and operational relationship attributes: buying firm's commitment, cooperation and operational linkages. Moreover, he presents two buyer-supplier relationship approaches. The first approach explains the relationship which is based on transformation process i.e. from awareness, exploration, expansion, and commitment to dissolution whereas second approach is based on the mechanism of buyer-supplier relationship at one point in time i.e. organizational governance ranging from a transactional-based relationship to a strategic association or vertical integration (Cooper, Gardner 1993, Webster 1992), or the continuum between competitive and cooperative positioning (Ellram 1995).

4. RESEARCH FRAMEWORK

Reviewing literature there are researches which examine supplier development from supplier's perspective through buyer-supplier relationship studies and highlights the important supplier perspective. Therefore, Krause (1999) highlights the importance of suppliers and emphasizes that buying firms consider its suppliers as virtual extension of the firm which will in result increase the motivation of suppliers towards the buying organization. Moreover, communication between buyer and supplier firms is significant prerequisite which creates an environment of supplier development (Wagner, Krause 2009, Krause, Handfield & Scannell 1998, Krause, Handfield 1999). Some authors suggest that supplier commitment and a level of inter-firm communication are seen as antecedents to supplier development. The successful supplier development factors are focused on perception of suppliers as partners and their virtual extensions. For the purpose, higher management collaboration and commitment along with supplier acknowledgment, direct investments into the operations of suppliers, effective communications in between the buyer and supplier firms, and a secure multiple contact point are the success factors for supplier development to improve their performance and capabilities (Krause 1997, Krause, Ellram 1997a, Krause, Ellram 1997b). Further, critical success factors included supplier commitment, trust, and alignment of organizational cultures which are more important in supplier development strategy (Handfield et al. 2000, Hartley, Choi 1996).

Moreover, purchasing literature emphasis the significance of supplier development favoring an organization's operations strategy and makes sure the suppliers performance and competences. The focus remains on supplier development drivers and it helps to explore the impact of these initiatives on performance and competences (Hahn, Watts & Kim 1990, Monczka, Trent & Callahan 1993, Hartley, Choi 1996). Figure 4 elaborates a detailed research framework and a structural analysis which concludes the literature review and explains different steps for the supplier development process and supplier-buyer relationship.

Supplier development and buyer-supplier relationship need to be in a systematic way which helps firms to organize the process and collaborate with suppliers for the improvement of product manufacturing capabilities. Supplier development carries a process including 1) supplier assessment, 2) competitive pressure, 3) supplier incentives, 4) direct involvement that elaborates a detail version of steps to get a competitive advantage and to develop buyer-supplier relationship. In the same vein, research framework indicates that companies follow an evolutionary route to develop their supplier's performances and relationships. They try to focus on adoption of total quality management (TQM) followed by evaluation and culmination in supplier development strategies (Krause, Handfield & Scannell 1998). Moreover, Modi and Mabert (2007) stated following supplier development strategies:

4.1 *Competitive pressure:* Companies use different supplier sources and market forces to develop competitive pressure. This strategy not only helps the organizations to analyze their suppliers' competence and performance and to build the long-term relations but motivates others develops their performance quality. Purposefully, firms use *multiple suppliers* to keep a competitive pressure among different suppliers. This support buying firms to get improved quality process services and they can inspire suppliers to keep the quality, delivery, or whatever supplier performance characteristics high by rewarding them with huge volume of the business over time (Tezuka, 1997). Therefore, buying firms apply this method to its suppliers when they need competitive offers from different suppliers to attain a comparatively cheaper purchase price (Krause, Scannell, & Calantone, 2000a). The *threat of switching* suppliers or losing business to other supplier creates a possibility or condition to provide suppliers a motivation to keep the competitiveness up with high quality supply at a low cost. Buyers expected to have developed relations with more than one supplier while dealing with manifold or parallel sourcing but buyers try to develop a strong relation with only one supplier dealing with sole sourcing. However, if there are certain switching costs (firm specific investment costs) involved, the buyer will hesitate to threaten supplier for a specific deviation in quality (Richardson & Roumasset, 1995).

4.2 *Evaluation and certification:* Evaluation and certification system supports the organizational strategies regarding current and expected performance of suppliers and ensures the suppliers about their performance and business prospects of organization. For the purpose, evaluation and certification system is an important tool of communication between buyer-supplier and a motivational process for the suppliers to improve their performances. This evaluation and certification system comes under *supplier assessment* which is a key enabler in between supplier development activities and buyer-supplier relationship development. Supplier assessment is not only an important tool for buying firms to calculate the performance of suppliers in comparison of several other suppliers but it also allows

buying firms to set future direction standards of suppliers' performance (Krause et al. 2000). Supplier assessment tool explains and elaborates the detailed evaluation of suppliers' managerial competencies, quality, technical competencies, cost, and delivery capabilities (Giunipero, 1990; Hahn, Watts & Kim 1990). Therefore, it is very useful in providing *feedback* to its suppliers about their performance index and competencies. In fact, feedback is the evaluation and comparison of expectations and outcomes of suppliers' activities which integrates the competitive strength of the market to address the current performance and encourage them in improving performance (Krause et al. 2000).

4.3 Incentives: Incentives play a vital role in developing the motivation and interest of suppliers towards their capabilities and competence including; awards, cost savings, consideration for increased volumes etc. Supplier incentives are the key motivators for suppliers to improve their performance and in building strong and long-term relationships. Moreover, if incentives are not offered and awarded, suppliers are unwilling or reluctant to keep up and build long-term relations with buying firms. Therefore, literature suggests that supplier incentives may enhance the possibility and suppliers' will and satisfaction to follow the buyers' required demand (Ghijssen, Semeijn, & Ernstson, 2010). However, supplier assessment and supplier incentives have indirect influence on performance of suppliers (Krause et al. 2000). Positive supplier's incentives for improved performance can be in the form of *increased business volume* and vice versa. Keeping this in view, suppliers focus more on the delivered performance to the buyer and maintain the required standard for *future business considerations* which usually has a positive impact on operational knowledge transfer activities (Modi & Mabert, 2007). These activities involved in suppliers' incentives allow buying firms to evaluate continuous improvements in suppliers' performance by increasing the performance expectations and *recognition for improved performances*. Thus, supplier's incentives activities foster the momentum of suppliers to provide continued performance to strengthen the buyer-supplier relationship (Krause et al. 1998).

4.4 Direct Involvement: Companies use proactive method through direct involvement and make sure their existence by making capital and equipment investments, acquiring supplier firm operations partially, and by investing human and organizational resources to develop suppliers' performance and competence. Buying firms are eager to get directly involved in the supplier development programs which include different activities and actions regarding investments in supplier development resources. In this vein, Williamson (1985, 1981) provides a holistic picture of transaction-specific investments in buyer-supplier relationship and supplier development activities and direct involvement can be a reason to reduce transaction cost and uncertainty of buying firms. On the other side, suppliers' involvement into buyer-supplier relationship also enhance the strength of relationship (Ghijssen et al., 2010). Many variables in direct involvement label the supplier development activities and enhance the performance of both buyers and suppliers (Krause & Ellram , 1997; Humphreys, Li, & Chan, 2004; Sánchez-Rodríguez & Martínez-Lorente, 2004). These supplier development activities involve *site visits, training and education programs, technical assistance and investments* with suppliers. Continuous site visits allow suppliers to focus on the required quality by the buyers and enhance the process capability. These efforts are really important in supplier development actions which lead to enhance the performance (Modi & Mabert, 2007).

-----Figure 4 approximately here-----

Firms are employing the supplier development programs and strategies progressively to develop suppliers' performance and to build strong relationships with them to continue competitiveness in the market. According to Modi and Mbert (2007), supplier's development strategy has a strong link in developing suppliers' performance and capabilities and involving top management into the process to build purposeful relationship with suppliers. This link creates operational knowledge transfer activities and assistance to select a set of suppliers which triggers supplier development activities.

Therefore, this paper explores the possible supplier development strategies that are useful for buying firms for supplier development. Moreover, this study develops a research framework where each building block explains different ideas to develop strong relationships with suppliers. Finally, overall research framework provides the opportunities where supplier development and buyer-supplier efforts ultimately improve the performance of firms.

5. DISCUSSION/CONCLUSION

In this paper, a detailed literature overview of supplier development strategies and buyer-supplier relationship is presented. Many of different activities can be used to improve the performance of suppliers including low involvement actions (supplier evaluation) to more elaborate and resource demanding action (investing in production equipment and supplier's employees training) tasks (Wagner, Krause 2009, Arroyo-López, Holmen & de Boer 2012, Modi, Mabert 2007). Supplier development activities can be summarized as 1) introduction of competition to the supply base, 2) supplier evaluation for further development, 3) supplier certification, 4) elevation of performance expectations/goals, 5) recognition and rewards, 6) promise of future benefits, 7) training and education of suppliers' staff, 8) direct investment in the supplier by the buying firms, 9) exchange of personnel between buyer and supplier organizations, 10) supplier plant visits, 11) intensive information exchange with suppliers, 12) collaboration with suppliers to improve the material and development of new materials, and 13) involvement of suppliers in new product development process (Krause 1997, Krause, Ellram 1997a, Krause, Ellram 1997b).

One objective for supplier development is to transfer competences from the customer to the supplier. These capabilities gradually develop the basic skills to guarantee the performance index towards continuity of development and innovation. For the purpose, this transmission of competencies may be accomplished through different actions and the execution of organizational procedures facilitating an association and interactions, sharing the information, and integration of best practices to strengthen or enhance the quality of knowledge to be transferred (Hartley, Zirger & Kamath 1997, Krause, Scannell & Calantone 2000, Sako 2004, Dyer, Hatch 2004). Moreover, there are some critical elements in supplier development that play an important role to improve supplier performance. These elements include the involvement of buyer building a perception as partners. Moreover, two-way multifunctional communication, top management interest, and building cross functional teams are most significant factors making supplier development strategies (Krause, Ellram 1997a).

Furthermore, supplier development has an effect on financial performance indicators such as sales, return on equity (ROE), total return to stakeholders, and net present value (Rosenzweig, Roth & Dean Jr. 2003, Tracey 2004, Petersen, Handfield & Ragatz 2005). For the purpose, it is examined that supplier development has a vital impact on operational performance improvement i.e. cost, quality, and cycle time. Supplier development is a key factor and positively effects on buyer's performance specially in product development integration, collaborative planning and information system integration (Frohlich, Westbrook 2002, Narasimhan, Kim 2002, Rosenzweig, Roth & Dean Jr. 2003, Droge, Jayaram & Vickery 2004, Petersen, Ragatz & Monczka 2005, Ellram et al. 2002). Suppliers with high performance rating have strong process improvement capabilities with involvement of purchasing function and considering it with top priority (Frohlich, Westbrook 2002, Narasimhan, Kim 2002, Rosenzweig, Roth & Dean Jr. 2003, Droge, Jayaram & Vickery 2004, Petersen, Ragatz & Monczka 2005, Ellram et al. 2002). In the same vein, information sharing is a significant factor which foresees the competitive existence of a buyer and helps to measure the process of supplier assortment (Kannan, Tan 2002).

Most of the firms prioritize their supplier development goals according to the delivery, order, cycle times, quality, product development, and operational capabilities (Wagner, Krause 2009). For the purpose, companies follow an evolutionary path to increase supply base performance. They consider TQM interventions i.e. supplier collaboration, customer requirements, cross-functional teams, measuring performance through scientific methods, and quality tools usage. Therefore, external suppliers are also much more important to be focused to conduct a supply base evaluation on the acknowledgment to develop the material quality, lower development costs, reduction in purchasing prices, and to improve the responsiveness of suppliers. Once supply base performance is assessed, companies focus on the consolidation of purchased volumes with fewer suppliers in order to eliminate suppliers incapable of meeting expectations (Krause, Handfield & Scannell 1998).

6. FUTURE IMPLICATIONS

Most of the organizations hold a relationship and develop a key strategy for constant competitive achievement. In the supplier development process, buyers and suppliers need to consider the amount of investment and aligning processes and cultures to improve the supplier performance and capabilities. After the formation of buyer-supplier relationship, buyers need to realize the structure to maintain a reasonable relation with better suppliers how to develop them for long-term relations. On the other hand, suppliers need to be proactive and focused with the mutual interest and development processes of buyers.

This study elaborates the theoretical point of view for the supplier development and buyer-supplier relationship and gives only a theoretical proof. Future research should consider a comprehensive case study with the given theoretical research framework adding empirically analysis of transaction cost economics and social exchange concept. Buyer-supplier relationship analysis with variables of transaction cost and social exchange theory will help organizations to get a detailed view of supplier development and sustainability of buyer-supplier relationship. Moreover, future empirical research will help organization to form cross-functional teams, involving top management role, checking alternative rewards and recognitions, determining the criteria to identify better suppliers and efforts towards sustaining the long-term relationship with suppliers. For the purpose, the structural factors of transaction cost economics (i.e. bilateral investments in specific assets to reduce the transaction cost and enhance the transaction value) and social factors (i.e. trustworthiness, information sharing) will be beneficial for the academia to understand the concepts of supplier development process. In fact, knowing the social factors and structural arrangements of buyer-supplier relationships that lead to reduction of transaction costs and enhancement of transaction value will help the managers to effectively manage their buyer-supplier relationships and development.

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APPENDIX 2

Figures, Images and Tables

Table 1
Supplier development approaches

Factor	Author	Explanation
Communication	(Krause 1997, Galt, Dale 1991, Wen-Li et al. 2003, Wagner, Krause 2009)	Interaction between supplier and buyer
Competitive pressure among suppliers	(Krause 1997, Galt, Dale 1991, Wen-Li et al. 2003)	Use of two suppliers to create competition
Contract	(Galt, Dale 1991)	Contract between the buyer and supplier
Customer base	(Chakraborty, Philip 1996)	Suppliers number of customers
Demographic information	(Watts, Hahn 1993, Krause, Scannell 2002)	Information like gross annual contract sales, number of employees etc.
Direct involvement	(Krause 1997, Krause, Scannell 2002)	Buyer firm site visits, product knowledge, training of suppliers personnel, investment to suppliers operation
Green supplier development	(Blome, Hollos & Paulraj 2013, Dou, Zhu & Sarkis 2013, Igarashi, De Boer & Fet 2013, Fu, Zhu & Sarkis 2012, Lee, Kim 2011, Bai, Sarkis 2010)	Green and sustainable supplier development
Interdependence	(Chakraborty, Philip 1996)	The relationship with buyer and supplier
Level of involvement in supplier development programs	(Watts, Hahn 1993, Krause, Ellram 1997a)	Management support for supplier development projects
Local versus international sourcing	(Galt, Dale 1991)	Product is produced locally or sourced from abroad
Product development involvement	(Chakraborty, Philip 1996, Arumugam, Derakhshan & Boon 2011, Talluri, Narasimhan & Chung 2010)	The role that the supplier plays in product development
Supplier base	(Krause 1997, Galt, Dale 1991)	Number of suppliers in buyer firm supplier base
Supplier certification	(Galt, Dale 1991, Krause, Scannell 2002)	Buyer nominate best performing suppliers
Supplier development incentives	(Krause 1997, Krause, Scannell 2002)	Promising current benefits, promising future business, recognition achievement
Supplier development outcomes	(Hartley, Zirger & Kamath 1997)	Result oriented, process oriented
Supplier development program objectives	(Watts, Hahn 1993, Arráiz, Henríquez & Stucchi 2012)	To improve quality, on time deliveries, technical capability etc.
Supplier development program perspective	(Watts, Hahn 1993, Krause, Ellram 1997a, Arroyo-López, Holmen & de Boer 2012)	New sources or long term cooperation.
Supplier development program team	(Watts, Hahn 1993)	Nominated teams for supplier development.
Supplier evaluation	(Krause 1997, Watts, Hahn 1993, Wen-Li et al. 2003, Krause, Ellram 1997a, Hahn, Watts & Kim 1990, Humphreys, Li & Chan 2004)	Buyer personal is assigned to study the present system followed by supplier or supplier itself providing the required data about their present system to the buyer
Supplier involvement in product development and innovation	(Johnsen 2009)	Supplier involved in product development and innovation which shorter time to market and improved quality.
Supplier satisfaction	(Ghijssen, Semeijn & Ernstson 2010)	Indirect influence strategies and promises encourage supplier satisfaction.
Supplier selection	(Galt, Dale 1991, Igarashi, De Boer & Fet 2013, Ordoobadi 2009, Ordoobadi 2009, Ho, Xu & Dey 2010, Lee 2009, Önüt, Kara & Işik 2009, Chen, Li 2008)	Selection of suppliers according piece, quality, on time deliveries etc.
Supplier training	(Krause 1997, Galt, Dale 1991)	Training program with supplier organized by buyer firm
Task Structure	(Chakraborty, Philip 1996)	Unstructured, semi-structured, structured
Vendor selection methods	(Chakraborty, Philip 1996)	Open tender, closed tender, direct selection

Table 2

Factors to improve performance and supplier development (Humphreys, Li & Chan 2004)

Infrastructure factors of supplier development	Factors to improve supplier performance
Strategic goals	Increasing supplier performance goals
Effective communication	Providing the supplier with training
Long term commitment	Equipment, technological support and investment
Top management support	Personnel exchanging
Supplier evaluation	Evaluation of supplier performance
Supplier strategic objectives	Recognizing supplier progress in the form of awards
Trust	

Table 3

Overview of differences between reactive and strategic supplier development (Krause, Handfield & Scannell 1998)

Factors	Reactive	Strategic
Primary question	A supplier performance problem has occurred—what is needed to correct the specific problem?	We have dedicated resources to develop the supply base—where should resources be allocated for the greatest benefit?
Primary objective	Correction of supplier deficiency	Continuous improvement of supply base
Unit of analysis	Short-term improvements	Long-term competitive advantages
	Single supplier	Supply base
Selection/prioritization process	Supplier development project	Supplier development program
	Supplier self-selects through performance or capability deficiency	Portfolio analysis
Drivers (examples)	Problem-driven	Pareto analysis of commodity/suppliers
		Market-driven
	Delivery dates missed	Supplier integration into the buying firm's operation
	Quality defects	Supply chain optimization
	Negative customer feedback	Continuous improvement
	Competitive threat for buying firm	Value-added collaboration
	Production disruptions	Technology development
Change in make/buy decision	Seek competitive advantage	

Figure 1
Progression towards supplier's development strategies and improved performances (Krause, Handfield & Scannell 1998)

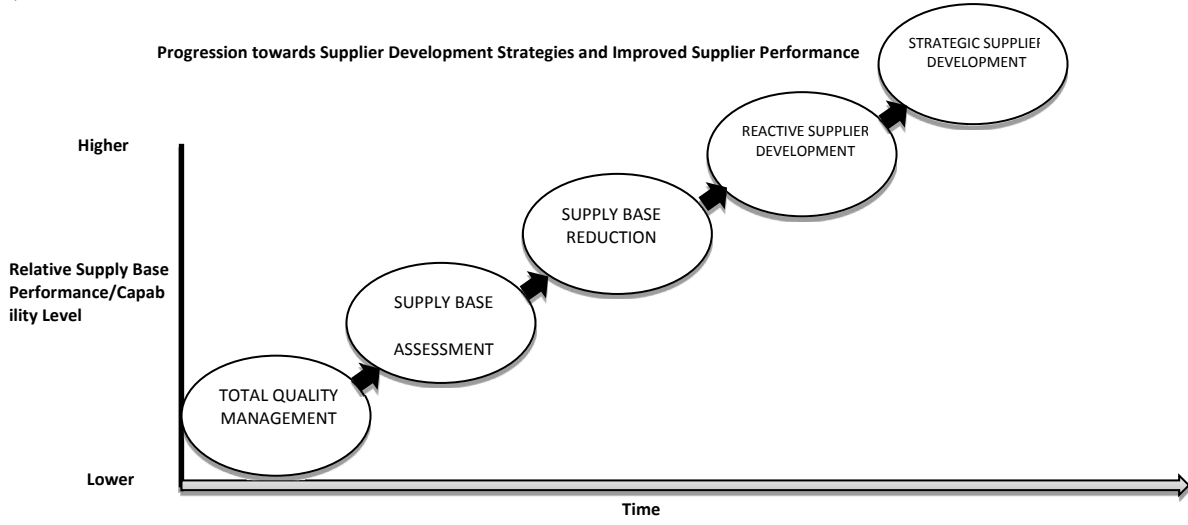


Figure 2
Strategic supplier development process (Krause, Handfield & Scannell 1998)

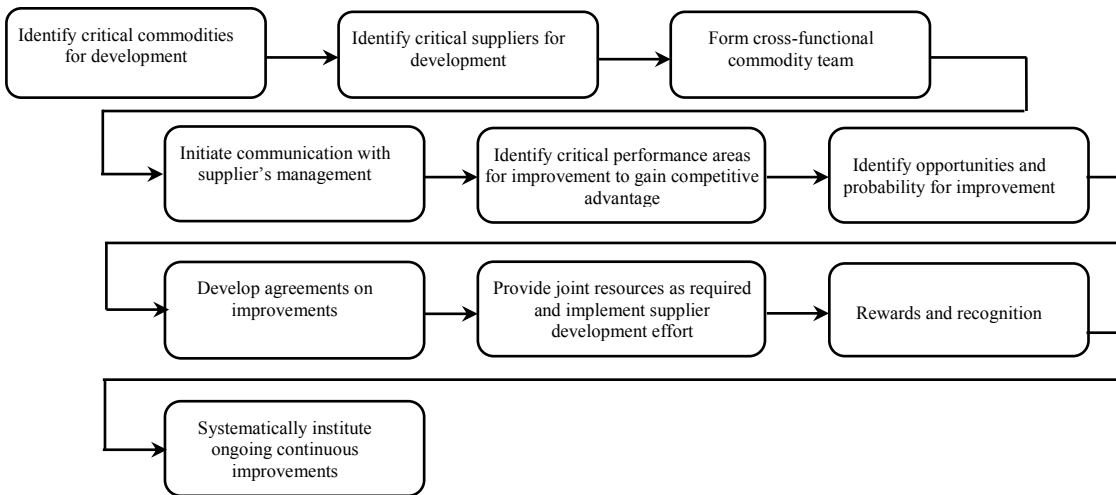


Figure 3
Buyer-supplier relationships (Terpend et al. 2008)

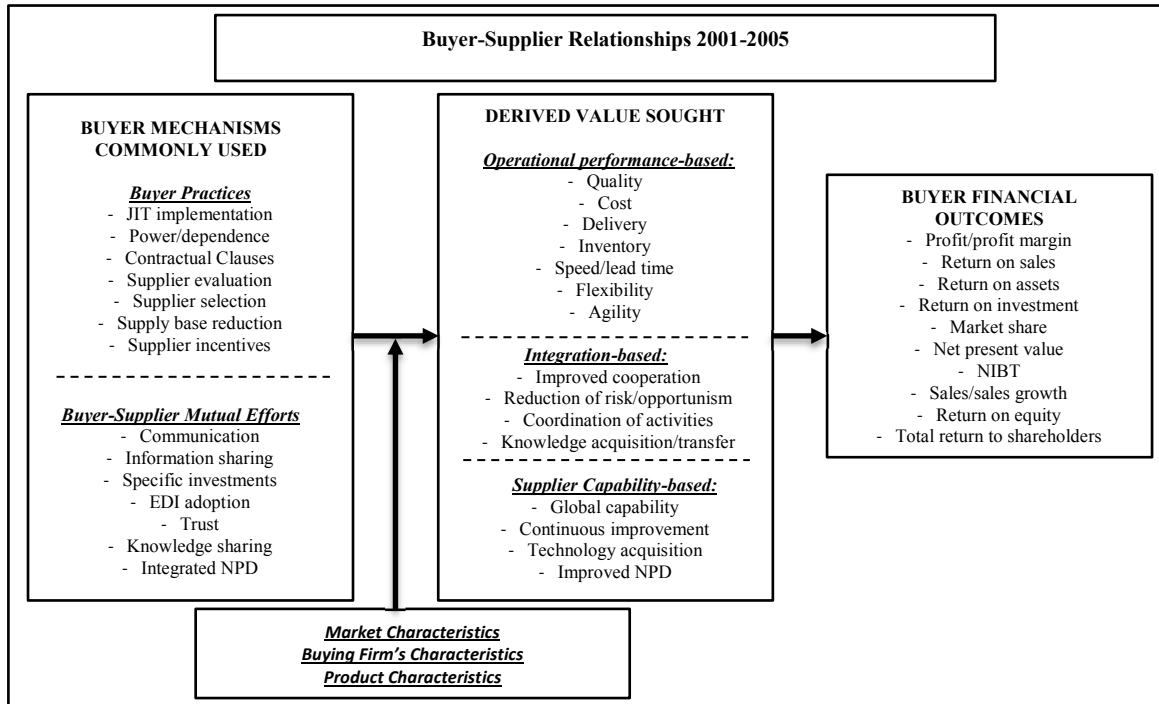


Figure 4

Operational breakdown of the values of buying firms' approaches to develop supplier performance

