



An Empirical Analysis of the Buyer's Perspective of Gaining Competitive Advantage through Supplier Development

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Abstract: *This study analyzes how buyer firm's supplier development efforts can help achieve buyer's competitive advantage. The main goal of this analysis is to understand how various supplier development efforts could impact the operational performance of a buyer. The study used the survey responses from consumer electronic businesses in Karachi. The study developed a model and used these responses to test hypothesized relationships among various dimensions of supplier development and buyer's competitive advantage. The study found that the two most significant factors affecting competitive advantage and operational performance of buyer were joint actions and trust. The study provides important implications regarding supplier development and buyer competitive advantage for both supply chain managers and academicians.*

Keywords: Supplier development, market responsiveness, operational effectiveness, competitive advantage, joint action, asset specificity, performance expectations, trust.

Introduction

The term supply chain means the network of activities starting from the suppliers end till the customers end. The start of any activity generally starts from the natural sources. We can say that it consists of activities from the upstream channel members to the downstream channels members. It can be understood from an agricultural product example, which starts from the seed supplier that supplies provide seeds to the farmer who uses these seeds for agricultural product sowing and then supply this product to the manufacturer. The manufacturer, after production of the finished product, supplies it to the distributor. Distributor sends the products to the wholesaler who in turn sends the products to the retailer from the customer finally have the product. This was the simple example of activities starting from the upstream channel members until the downstream channel members. Supply chain can also be viewed as a network from the tears of suppliers to the tears of customers or network of inbound logistics to outbound logistics. Per APICS (American Production and Inventory Control Society), it is a worldwide network exercised to deliver products and services from raw material suppliers to end consumers by anarchistic run of information and cash. Basic supply chain model consists of three parties which are

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supplier, producer, and customer with three mandatory flows of physical product flow, information flow (communicating specifications) and cash flow and reverse product flow which consists of defectives/repaired items, recalls, refilling and recycling. Supply Chain Management (SCM) as per APICS is the designing, planning, implementing, monitoring, and controlling of all supply chain activities with the purpose of creating value, building worldwide system to move and positioned the inventory, building a strong infrastructure as compared to competitors, matching of supply with the demand and assessing the performance globally.

According to [Krause \(1997\)](#); [Ellram and Krause \(2014\)](#) supplier development refers to buyer's efforts to increase supplier's performance and capabilities. The prime objective buyers would like to achieve through supplier development is fulfillment of their own supply needs. The main goal of this study is to analyze how various supplier development initiatives could affect the buyer's competitive advantage. During the last decade, manufacturing firms are increasingly paying attention to the performance of their supply chains. Suppliers are a vital and important part of any supply chain. An increasing number of manufacturing firms are realizing the significant performance of their suppliers in order to establish and sustain competitive advantage ([Peters, Hofstetter, & Hoffmann, 2011](#); [S. Li, Rao, Ragu-Nathan, & Ragu-Nathan, 2005](#)). The literature on supply chain has started to focus on supplier development initiatives and its effect on buyer and supplier performance ([Goffin, Lemke, & Szwejczewski, 2006](#); [Monczka, Trent, & Callahan, 1993](#)). Many studies ([Hahn, Watts, & Kim, 1990](#); [Gunasekaran & Ngai, 2005](#)) have shown that implementing effective supplier development initiatives results in enhanced buyer and supplier performance.

The important question here is which specific supplier development initiatives can provide unique contribution to the competitive advantage of buyer. Literature points out many supplier development initiatives. These include raising performance goals for suppliers ([S. Li et al., 2005](#)); supplier training ([Liu, Zhang, Hendry, Bu, & Wang, 2018](#)); supplier support initiatives (including equipment, technology, investments) ([Monczka et al., 1993](#); [Liu et al., 2018](#)); buyer-supplier inter-firm human resource exchange ([Newman & Rhee, 1990](#); [Graca, Barry, & Doney, 2015](#)); supplier performance assessment ([Giunipero, 1990](#); [Terpend & Krause, 2015](#)); and supplier reward schemes ([Galt & Dale, 1991](#); [Curkovic, Vickery, & Dröge, 2000](#)).

Many research studies provide extensive discussion of the issues related to establishing of supplier development plans including the features, advantages, and supervision of such programs ([Liker & Choi, 2004](#); [Ellram & Krause, 2014](#)), the necessity of buyer firm's involvement in supplier development, mechanism of developing supplier development programs, and expected benefits to be obtained from supplier development initiatives ([Reed & Walsh, 2002](#); [Routroy & Pradhan, 2014](#); [Goffin et al., 2006](#)).

While existing literature does provide support to the notion that supplier development does help buyer achieve and sustain competitive advantage ([Hahn et al., 1990](#); [Monczka et al., 1993](#); [Burt, Dobler, & Starling, 2003](#)), it does not inform which are the specific supplier development initiatives that buyer firms could focus on and that would ultimately result in competitive advantage of buyer ([Soares, Soltani, & Liao, 2017](#); [Robinson & Malhotra, 2005](#)). In addition, there is limited literature that provides empirical examination of supplier development initiatives and its impact on buyer's competitive advantage in the

context of developing countries. The major objective of this study is to empirically examine the relationship between supplier development initiatives and competitive advantage of buyer. That examination could help predicting the buyer's competitive advantage in the context of emerging countries.

This research begins with a comprehensive review of supplier development literature. A conceptual model is then developed that links supplier development initiatives with buyer's competitive advantage. The model is then tested; results are presented, and analyzed. To conclude, the study discusses research implications and areas of future research.

Review of Literature

Literature provides ample support to the notion that buyer firms can enhance their performance by focusing on development of their suppliers (Sakita, 2016; Saeki & Horak, 2014). Utilizing the resources-based view, (Barney, 1991) argued that firms gain competitive advantage when they have resources and capabilities that are valuable, heterogeneous, and immobile. Supplier development refers to buyer's actions aimed at enhancing competitive capability of its suppliers. The distinctive give-and-take relationships between buyer and supplier become the unique resource/capability of the buyer that can help buyer achieve and sustain competitive advantage.

Economists have long held the idea that, through cooperative relationships, resource owners can increase their productivity (Low & Ho, 2016; Alchian & Demsetz, 1972). According to Schmalensee, Armstrong, Willig, and Porter (1989), asset-specific investment can provide trading partners increased gains from trade. According to Dyer (1996) and (Pulles, Veldman, & Schiele, 2014), a firm can enhance its efficiency by creating specialized assets in conjunction with its trading partners. Since supplier development programs are relations-specific programs, the buyer expects to gain competitive advantage by transforming its general assets into specific resources/capabilities (Filippini & Forza, 2016; De Toni & Nassimbeni, 2000; W. Li, Humphreys, Yeung, & Cheng, 2007).

Still, cost incurs to achieve specialization within a production network. Fear of opportunism results in increased transaction costs when Buying firms make specialized investments. This increase is because specific assets require more complex control structures. These complex structures are needed to gain good bargaining position when dealing with a supplier having specialized assets and in a much strong bargaining position (Williamson, 2007).

Dyer (1996) found that Japanese buying firms in automobile sector made greater asset-specific investments and were able to achieve superior performance. This finding is not surprising. Asanuma (1989); Saeki and Horak (2014), in their study of Japanese manufacturing firms, found that buyers and supplier maintained very close relationships. One important finding was that transaction costs of Japanese buying firms were significantly lower compared to their US counterparts. This suggests that firms can gain competitive advantage by simultaneously increasing their asset specificity while lowering transaction costs. A greater understanding of achievement of this dual benefit could shed more light onto the process of developing the collaborative relationships between buyer and supplier.

Supplier Development

There are numerous initiatives buyer firms can take to improve capabilities and performance of their suppliers. Broadly, these initiatives can be divided into following categories.

Asset Specificity

Asset specificity refers to the transaction-specific investments that a buying firm makes in its supplier (Krause & Ellram, 1997). This includes direct and supplier-specific investment of buyer in human or physical assets. Some of these investments may include investments into customized equipment and tools, technical support and training (W. Li et al., 2007). Dyer (1996); Pulles et al. (2014) argues that these specific investments could encourage suppliers to customize their products for customers. This could result in reduced procurements costs, reduces product development life cycle, and more effective communication between supplier and customers.

Joint Action

It refers to in-depth buyer-supplier cooperation. This cooperation covers significant activities needed for mutual improvement of performance of both parties (i.e. buyer and seller). One example is the buyer's participation in operations management of supplier. Another example is supplier assistance in product development process of buyer firm. Close buyer-supplier relationships can result from increased scope of joint activities (Heide & John, 1990).

Performance Expectation

It refers to what performance improvements buyers expect from their suppliers (Krause & Ellram, 1997). One way to motivate suppliers is to increase their performance goals (Lascelles & Dale, 1989). Rewards for supplier performance improvement can be considered market-based incentives. These rewards are intended to encourage suppliers to increase their performance level.

Trust

With increase in its transaction-specific investments on a particular supplier, the buyer tends to develop a more close and dependent relationship with this supplier while exposing itself to larger risk and uncertainty levels (Krause, 1997). According to Williamson (2007), buyers must take measures to secure their transactions from the propensity of opportunism of their suppliers. One such important measure is contracts (Dyer, 1996; Pulles et al., 2014). Another but more effective and less costly way to safeguard these transactions. In addition, when buyer's trust on supplier increases the probability of joint action between buyer and supplier increases.

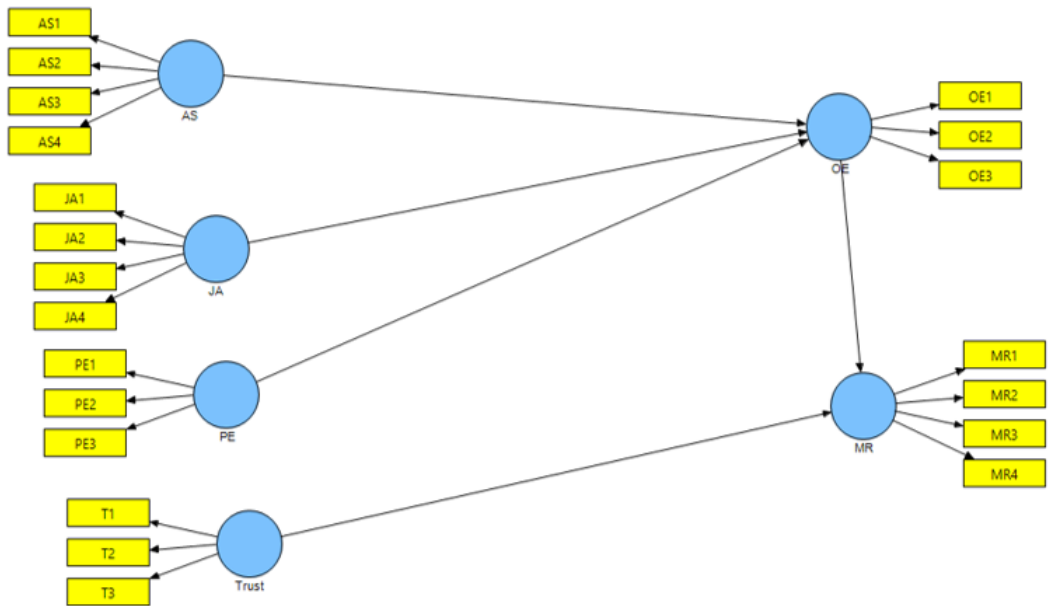
Buyer's Competitive Advantage

The buyer's competitive advantage comes in two important form: Operational Effectiveness and Market Responsiveness.

Operational Effectiveness

Researchers [S. Li et al. \(2005\)](#); [Clark \(1996\)](#); [Hayes and Wheelwright \(1984\)](#) held the view that to gain competitive advantage, buyer firms need to develop high quality products/services while minimizing their costs. As such, high quality and minimization of costs are considered important indicators of operational effectiveness of a buyer firm.

Figure 1
Conceptual Model



Market Responsiveness

Researchers [Nidumolu and Knotts \(1998\)](#) suggest that another important source of competitive advantage of buyer firms is market responsiveness. Market responsiveness can enable buyer firms to compete effectively in this era of intensified, global competition. [Harmsen, Grunert, and Bove \(2000\)](#) found in his study of managers of buyer firms, that managers considered market responsiveness as second most important core competency of a firm. Figure 1 shows the conceptual model used in this study. This model postulates that each initiative for supplier development results in improvement of buyer's competitive advantage ([Wagner, Fillis, & Johansson, 2005](#); [Hartley & Choi, 1996](#); [Monczka et al.,](#)

1993).

We analyzed all of the path linkages in our conceptual model (Figure 1) forming specific hypotheses for every path. The theoretical basis for the conceptual model was The following hypotheses were formulated.

H₁: There is a direct relationship between asset specificity and operational effectiveness.

H₂: There is a direct relationship between joint action and operational effectiveness.

H₃: There is a direct relationship between performance expectation and operational effectiveness.

H₄: There is a direct relationship between trust and market responsiveness.

H₅: There is a direct relationship between operational effectiveness and market responsiveness.

Research Methodology

Questionnaire

Based on extensive literature review, a questionnaire was developed. This study utilized this questionnaire to collect data. The questionnaire consisted of multiple statements against each construct. The questionnaire included multiple scale items for each construct used in the conceptual model. Managers from five businesses were asked to provide help in pre-testing of the questionnaire. This was done to ensure readability, non-ambiguity, coverage of all possible responses for close-ended questions. Three professors from business schools were also consulted. These professors had expertise in supply and purchasing. These professors evaluated survey items for ambiguity and clarity and appropriateness of measures for their respective constructs. In the light of comments made by people involved in pre-testing, minor modifications were made in the questionnaire. The finalized questionnaire was then circulated among the participants.

Sampling

The data used in this study was collected using a self-administered questionnaire. A list of consumer electronics businesses was compiled. Out of 653 questionnaires sent, 349 usable responses were received thus achieving a response rate of 53%.

Items used to estimate the predictor latent constructs were measured on a Ten- point Likert scale. The items used for each construct were derived from literature. A confirmatory factor analysis (CFA) was used to test the hypothesized model. Table 1 indicates the items used to estimate the predicted latent constructs (AS, JA, PE, and Trust), operational effectiveness, and market responsiveness.

Table 1
Constructs and their Items

Construct	Items	Reference
Asset Specificity	AS1: Our firm provides training on process control to our suppliers. AS2: Our firm provides support personnel to our suppliers. AS3: Our firm provides equipment/tools to our suppliers for their process improvement.	(Galt & Dale, 1991; Liu, Zhang, Hendry, Bu, & Wang, 2017) (Newman & Rhee, 1990; Graca, Barry, & Doney, 2015; Li et al., 2007) (Galt & Dale, 1991; Liu, Zhang, Hendry, Bu, & Wang, 2017)
Joint Action	AS4: Our firm provides capital for new investments to our suppliers. JA1: Our firm works with suppliers to eliminate non-value activities in their processes. JA2: Our firm engages suppliers in product development and design. JA3: Our firm shares information with our suppliers. JA4: Our firm shares knowledge with our suppliers.	(Galt & Dale, 1991; Liu, Zhang, Hendry, Bu, & Wang, 2017; Li et al., 2007) (Hahn et al., 1990; Bommel, 2010; Keatinga et al., 2008; Zhu et al., 2008a) (Watts & Hahn, 1993; Bommel, 2010; Keatinga et al., 2008; Zhu et al., 2008b) (Nakano & Hirao, 2011; Bommel, 2010; Seuring & Müller, 2008; Li et al., 2007) (Peters et al., 2011; Vermeulen & Seuring, 2009; Zhu et al., 2008)
Performance Expectation	PE1: Our firm is committed to increases supplier performance goals. PE2: Our firm recognizes supplier progress in the form of awards. PE3: Our firm is committed to provide supplier evaluation and assessment.	(Monczka, Trent, & Callahan, 1993; Michelsen, 2007; Green et al., 1998) (Galt & Dale, 1991; Michelsen, 2007; Green et al., 1998; Li et al., 2007) (Michelsen, 2007; Green et al., 1998)
Trust	T1: Our firm believes in the information provided by the supplier T2: Our firm believes that our suppliers are concerned about our success. T3: Our firm believes that our suppliers keep our interests in mind.	(Doney & Cannon, 1997; Cheung and Rowlinson, 2011) (Doney & Cannon, 1997; Cheung and Rowlinson, 2011; Li et al., 2007) (Doney & Cannon, 1997; Cheung & Rowlinson, 2011)
Market Responsiveness	MR1: Our firm believes that, due to improved supplier quality, we are able to accelerate our production process. MR2: Our firm believes that our suppliers have helped us improve our ability to quickly respond changes in the market. MR3: Our firm believes that our suppliers have helped us achieve product differentiation. MR4: Our firm believes that our suppliers have helped us achieve premium prices.	(Harmsen, 2000; Holt & Ghobadian, 2009; Clemens & Doughus, 2006) (Harmsen, 2000; Holt & Ghobadian, 2009; Clemens & Doughtus, 2006) (Harmsen, 2000; Holt & Ghobadian, 2009; Clemens & Doughtus, 2006) (Harmsen, 2000; Holt & Ghobadian, 2009; Clemens & Doughtus, 2006)
Operational Effectiveness	OE1: Our firm believes that our product cost has reduces due to our supplier development effort. OE2: Our firm believes that our product quality has improved due to our supplier development effort. OE3: Our firm believes that our operational efficiency has improved due to our supplier development effort.	(Kogg, 2003; Holt & Ghobadian, 2009; Clemens & Doughtus, 2006) (Eltayeb et al., 2011; Ageron et al., 2011; Ytterhus et al., 1999; Li et al., 2007) (Hayes & Wheelwright, 1984; Clark, 1996) (Hayes & Wheelwright, 1984; Clark, 1996) (Hayes & Wheelwright, 1984; Clark, 1996) (Holt and Ghobadian, 2009; Clemens & Doughtus, 2006; Li et al., 2007) (Holt and Ghobadian, 2009; Clemens & Doughtus, 2006; Li et al., 2007)

Results

The conceptual model developed in this study was analyzed using SmartPLS. Table 2 lists composite reliability results. To check the composite reliability of all constructs we calculated their composite reliabilities. The composite reliabilities of different constructs varied between 0.78-0.95. According to [Leong, Ooi, Chong, and Lin \(2011\)](#), in order establish composite reliability of a construct, the composite reliability value of a construct should be greater than 0.7. [Fornell and Larcker \(1981\)](#) suggested that, in order establish composite reliability of a measure, average variance extracted (AVE) for each measure exceeded 0.50. Based on these criteria, we can establish that all measures in our model are robust in terms of their internal consistency reliability.

Table 3 lists results of discriminant validity of various measures. In order establish discriminant validity of a measure, we need to check whether diagonal values in the matrix are greater than the off-diagonal elements in their corresponding row and column. The diagonal values represent the square roots of the AVEs. Looking at Table 3, we can see that this criterion is met for all measures. Therefore, we can establish validity of our measures used in this study.

Table 2
Assessment of the model

	AVE	Composite Reliability	R Square	Cronbachs Alpha	Communality	Redundancy
AS	0.7352	0.9170	0.0000	0.8781	0.7352	0.0000
JA	0.6879	0.8981	0.0000	0.8501	0.6879	0.0000
MR	0.5895	0.8512	0.2958	0.7665	0.5895	0.1402
OE	0.5524	0.7868	0.3965	0.6022	0.5524	0.1050
PE	0.8790	0.9561	0.0000	0.9312	0.8790	0.0000
Trust	0.5722	0.8003	0.0000	0.6341	0.5722	0.0000

Table 3
Discriminant validity (intercorrelations) of variable constructs

	AS	JA	MR	OE	PE	Trust
AS	0.8574	0.0000	0.0000	0.0000	0.0000	0.0000
JA	0.4784	0.8293	0.0000	0.000	0.0000	0.0000
MR	0.2708	0.3007	0.7677	0.0000	0.0000	0.0000
OE	0.4976	0.5471	0.5024	0.7432	0.0000	0.0000
PE	0.3226	0.2357	-0.0040	0.3420	0.9375	-
Trust	0.3717	0.4956	0.4292	0.4941	0.2449	0.7564

In order establish the convergent validity of our measures, we extracted the factor and cross loadings of all indicator items to their respective latent constructs. These results are presented in Table 4. In order establish convergent validity, all items should load more highly on their respective construct than on any other construct. Looking at Table 4, we can see the item loading values range from 0.70 to 0.95. All items were heavily on their respective construct. Each factor loading on its respective construct was highly significant as shown by t-value of each loading (see Figure 2). Looking at these statistics, we can establish the convergent validity of our measures.

Table 4
Factor loadings and cross loadings

	AS	JA	MR	OE	PE	Trust
AS1	0.8401	0.4014	0.1908	0.3827	0.2478	0.273
AS2	0.899	0.3922	0.2151	0.4251	0.3233	0.3258
AS3	0.9137	0.4282	0.2464	0.4493	0.3139	0.3274
AS4	0.7694	0.4142	0.2688	0.4403	0.2168	0.3404
JA1	0.4188	0.8429	0.2048	0.4579	0.17	0.4019
JA2	0.4286	0.8141	0.3263	0.5314	0.2207	0.4916
JA3	0.3385	0.8162	0.2593	0.3742	0.2086	0.3249
JA4	0.3835	0.8439	0.1913	0.421	0.1791	0.3949
MR1	0.1539	0.1941	0.8058	0.4306	0.0119	0.3071
MR2	0.2025	0.1910	0.7023	0.3106	0.0282	0.3142
MR3	0.2216	0.2875	0.8234	0.4208	-0.0073	0.3551
MR4	0.2581	0.2454	0.7331	0.3696	-0.0419	0.3431
OE1	0.3108	0.3323	0.1953	0.6869	0.2973	0.3371
OE2	0.2643	0.3641	0.5984	0.7526	0.0826	0.3892
OE3	0.5194	0.5058	0.2801	0.7867	0.3980	0.3733
PE1	0.3031	0.2547	0.0216	0.3310	0.9421	0.2556
PE2	0.2914	0.1905	0.0271	0.3135	0.9455	0.2374
PE3	0.3128	0.2159	-0.0611	0.3171	0.9249	0.1948
T1	0.3190	0.5498	0.3806	0.4686	0.1375	0.7255
T2	0.2732	0.2512	0.2867	0.3478	0.2005	0.7894
T3	0.2339	0.2592	0.2829	0.2666	0.2312	0.7530

Figure 2

Structural Model Results

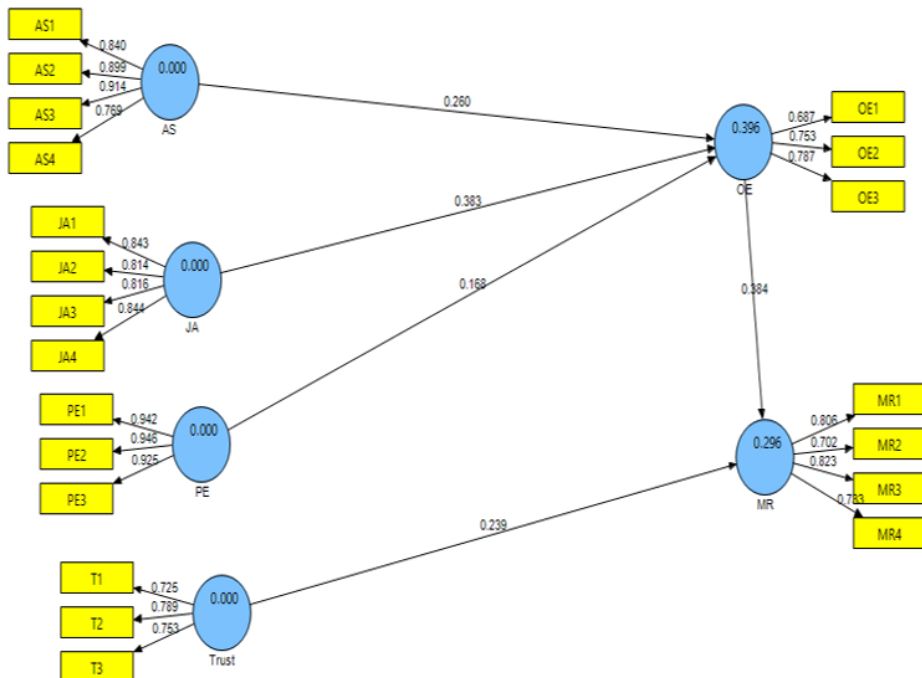
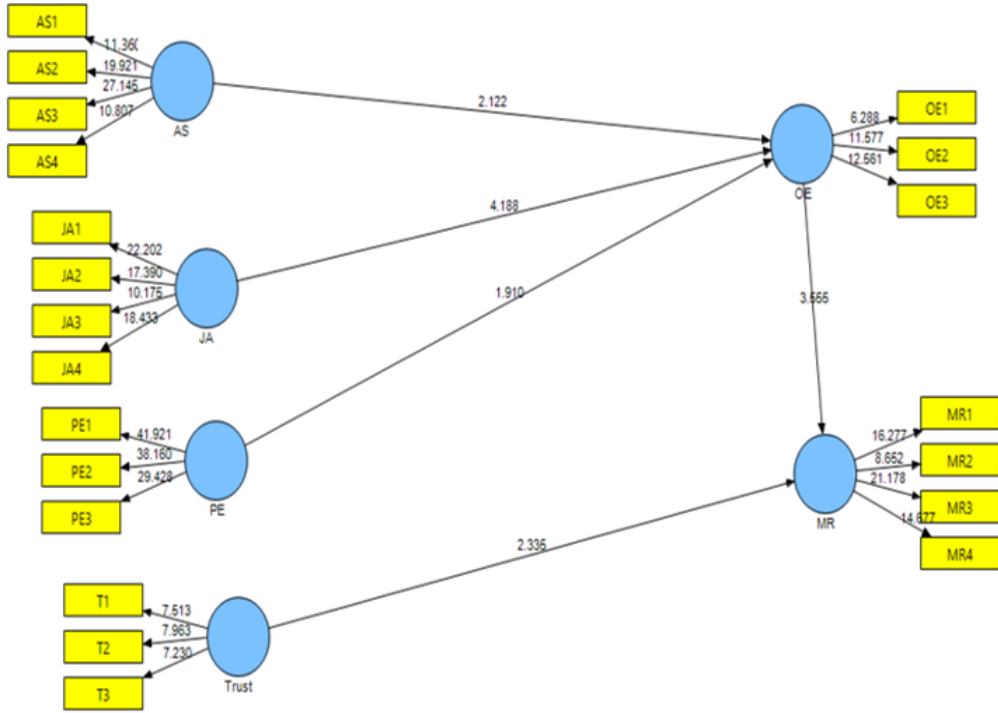


Figure 3
Conceptual Model-Significance of Constructs



Discussion

Table 5 presents the hypotheses and outcomes.

Table 5
Hypotheses conclusions

Hypotheses	Finding	Conclusion
H1: There is a direct relationship between asset specificity and operational effectiveness.	Yes (beta =0.260 , t-value=2.122)	Supported
H2: There is a direct relationship between joint action and operational effectiveness.	Yes (beta =0.383 , t-value=4.188)	Supported
H3: There is a direct relationship between performance expectation and operational effectiveness.	Yes (beta =0.168 , t-value=1.910)	Not Supported
H4: There is a direct relationship between trust and market responsiveness.	Yes (beta =0.239 , t-value=2.335)	Supported
H5: There is a direct relationship between operational effectiveness and market responsiveness.	Yes (beta =0.384 , t-value=3.555)	Supported

Figure 2 shows the results of conceptual model and the standardized regression weights. The t-values of various constructs are shown in Figure 3. Joint action and asset specificity

have significant and positive impact on operational effectiveness of buyer. Performance expectation has positive but non-significant impact on operational effectiveness of buyer. In addition, trust has significant and positive impact on market responsiveness.

In this study, we developed and tested a model that hypothesized relationships between different initiatives of supplier development and sources of buyer's competitive advantage. This model provided important information about how supplier development could affect buyer's competitive advantage. This model has also provided information about the relationship between the components of buyer's competitive advantage.

Asset Specificity and Operational Effectiveness

The results of analysis of conceptual model show that asset specificity has direct and positive impact on operational effectiveness. This finding is in support of previous studies. These studies suggest that high level of market responsiveness is an significant cause of competitive advantage (S. Li et al., 2005). Many studies (Dyer, 1996; W. Li et al., 2007) found that inter-firm asset specialization facilitates the ability of firms to improve their operational effectiveness. Williamson (2007) argued that a new supplier would be able to gain knowledge of exclusive technical and management procedures and task-specific labor skills. With this knowledge, supplier can subsequently perform tasks more quickly. Increased inter-firm human asset specificity can inform both buyer and supplier where the useful human resources reside in their respective firms. This relation-specific knowledge can help people at both firms gain substantial experience working together and there are less chances they will misinterpret information. Increased asset specificity ultimately results in less communication errors. This is because the feedback loop becomes more efficient. According to Buvik and Grønhaug (2000), this enhanced communication could provide faster product development and market responsiveness. This point was further supported by Cohen and Levinthal (1990) who found that with increased asset specificity both parties are in a better position to learn from each other's experiences.

Joint Action and Operational Effectiveness

This study found that joint action directly and positively impacts operational effectiveness. This result supports the work of previous researchers (Ellram & Krause, 2014; Liker & Choi, 2004; Womack, Womack, Jones, & Roos, 1990). These researchers found that effective collaboration between customers and suppliers results in enhanced product quality and decreased cost of operations. Many research studies (Hayes & Wheelwright, 1984; Clark, 1996) have argued that the critical objective of manufacturing concerns is to minimize cost while providing best quality products. Therefore, operational effectiveness means to pursue ways to achieve this objective. According to Clark (1996); Burt et al. (2003) quality of product can be enhanced by improving coordination in design and manufacturing. In order increase the reliability of the product, manufacturers need to give their suppliers more responsibility in the development of final product. Close buyer-supplier relationship can help buyer firms eliminate non-value added activities from their existing processes. According to Kulmala, Paranko, and Uusi-Rauva (2002), it could also help buyer firms to establish just-in-time delivery systems. These arrangements can provide mutual benefits

for buyer and supplier because they can economize their operations costs (Dyer, 1996). Clark, Fujimoto, and Cook (1991) support this idea by suggesting that close linkages, both within buyer firm and with suppliers, can help manufacturing firms develop cost-efficient, high-quality products.

Trust and Operational Effectiveness

This study found that buyer's trust directly and positively influences operational effectiveness of the buyer. This finding was expected and in line with the findings of earlier studies that examined what role trust played in buyer-supplier relationships (Scannell, Vickery, & Droge, 2000; De Toni & Nassimbeni, 2000; Smeltzer, 1997). According to Anderson and Narus (1990); Narasimhan and Nair (2005), trust is considered to be a cost-efficient and more effective mean for buyer firms to protect their asset-specific investments, reduce conflict and enhance supplier satisfaction with buyers. Swan and Nolan (1985) argued that suppliers tend to facilitate and develop customer trust when they see their customers (buyer firms) are actively seeking more collaborative relationships. Cohen and Levinthal (1990) argues that, when parties trust each other, information provided by them is used more and considered more valuable. These parties recognize the value of shared information. They assimilate this shared information to improve quality of their products. Dyer (1996) further argues that greater the scope of information shared, greater the expected quality of the product. Dyer (1996) argue that collaborative relationships are established when both parties establish exchange relationships founded on higher levels of trust. With such collaborative relationships, both parties can focus on long-term benefits. According to Noordewier, John, and Nevin (1990), these collaborative relationships ultimately result in enhanced competitiveness and reduced transaction costs for both parties.

Performance Expectation and Operational Effectiveness

This study found that buyer's performance expectation from its suppliers has no direct and significant impact on operational effectiveness of buyer. This result was unexpected. Previous literature (S. Li et al., 2005; Krause & Ellram, 1997) found that by raising supplier performance goals and rewarding performance improvement, buyer firms can motivate their suppliers to improve performance. According to (Monczka et al., 1993) buyer firms can only expect increased contribution from suppliers if they aggressively increase their performance expectations from suppliers. Krause (1997) further argues that buyer firms should only keep those suppliers that meet buyer's performance goals. Buyer firms should also recognize supplier's performance improvements by awarding them rewards (such as long-term contracts).

The some conflicting results of this study may be because of the particular industrial setting chosen for this study. In electronics industry of Pakistan, majority of businesses rely on short-term contracts with suppliers and dependent on supplier flexibility to respond to changing market conditions and customer demand. In addition, these businesses are unsure of their future prospects and consequently it is very difficult for them to reward their performing suppliers in terms of granting long-term contracts. For example, some businesses mentioned that customers are becoming very demanding with respect to cost

and quality. Customers want high quality and low cost. Still, uncertain about their future prospects, businesses are unwilling to make long-term investment to cater the needs of specific customers. This also means that businesses should not press their supplier with tough performance objectives without long-term commitment. Otherwise, suppliers can get frustrated and will not feel confident in their performance. Therefore, buyer firms looking to improve performance of their suppliers should be cautious when developing supplier performance objectives. They need to make sure that, in absence of long-term commitment, their supplier performance expectations should be realistic and achievable by suppliers.

Operational Effectiveness and Market Responsiveness

This study found that operational effectiveness has direct and significant impact on market responsiveness. This finding supports the findings of previous studies. According to previous studies, low cost and high quality are important to achieve competitive advantage for manufacturing-based concerns. Since operations management aims to provide better products/services at minimum possible costs, better quality and minimization of costs are considered important factors of operational effectiveness (S. Li et al., 2005; Clark, 1996; Hayes & Wheelwright, 1984). Various researchers (Harmsen et al., 2000), have argued that market responsiveness is also essential to achieve competitive advantage for businesses. In this context, it can be said that that enhanced operational effectiveness directly contributes to the increased level of market responsiveness of a firm.

Conclusion

This study provided a detailed investigation of the impacts of specific efforts of supplier development on buyer competitive advantage. The results suggest that different aspects of supplier development produce different impact on different aspects of buyer's competitive advantage and supplier development should take place while taking into consideration the expected benefits for the buyer. The study finds that, in general, supplier development efforts produce a positive impact on buyer's competitive advantage. The study found that joint action and trust were two most significant dimensions of supplier development that positively and significantly impacted the buyer's competitive advantage. As such, buyer firms should focus on establishing close collaboration with suppliers in their product design process and removal of non-value added activities from existing processes. Increased buyer-supplier trust can not only provide a long-term mutually beneficial relationship but also reduce transaction costs for both buyer and supplier. This study also found that higher level of trust could help buyer firms enhance their operational effectiveness and its impact is strong. However, an increase in performance goals of supplier and recognition of their efforts appears not impact the competitive advantage of buyer firms. As such, buyer firms should exercise this aspect of supplier development with caution. Given that supplier development requires considerable resource, this study provides useful insights for both academicians and practitioners.

Limitations of Study and Future Research Areas

Every study has some limitations and this study is no exception. First, this study was carried out in a single industrial setting. Though this study was able to provide accurate, context-specific measures, future studies may be conducted in different industrial settings to establish the nature of supplier development activities and to provide a better understanding of how different dimensions of supplier development may impact supplier performance and competitive advantage of buyer. More focus can be placed on those industries that are more important for Pakistan's economy. Second, this study used cross-sectional data. Future studies could use longitudinal data to understand the impact of time on the nature of supplier development activities and its role in buyers competitive advantage. Third, future studies could use triangulation of research techniques, such as surveys, experiments, and qualitative methods to enhance the validity of the proposed model and extend the theory development. This multi-method approach could also serve to provide an improved framework of buyer-supplier relationships, converge research, and accumulate knowledge. Future studies could also be case studies that could focus on particular cases of buyer-supplier relationships and could shed more light on various aspects of supplier development strategies and their benefits.

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