Supplier Development: Practices and Critical Factors

A Dyadic Multiple-case Study

Author: Hoda Soleymani Farokh Zadeh
Examiner: Professor Helena Forslund
Tutor: Veronica Svensson Ulgen
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Abstract

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Author: Hoda Soleymani Farokh Zadeh
Examiner: Professor Helena Forslund
Tutor: Veronica Svensson Ülgen

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Background: As enterprises focus on their core competence, outsourcing other activities other firms can do better, the necessity of managing supplier relationships and upgrading the inter-firm relationships become evident. Supplier development as a potential attempt, tries to fill the gap between ideal criteria and the particular suppliers’ actual capabilities and performance in the supply chain. The buying firms initiate the supplier development efforts in order to increase their abilities to create and deliver a superior value to their own customers.

In this respect, it is essential to investigate the practices and story of what the buyer and the supplier do in relation to supplier development and what factors contribute to the success of the program and benefits of the dyad. Furthermore, acknowledgment of difficulties that might bring failure in the SD should be taken into consideration so as to possibly avoid them. The supplier development is widely neglected a dyadic view in literature review. The importance of this study is adding the supplier’s standpoint to the buyer’s view in order to achieve the dyadic perspective associated with the practices, the success factors and the barriers.

Purpose: This research aims to identify and describe the practices of supplier development in buyer-supplier dyads. The success factors of the supplier development program and the barriers to the supplier development programs are also investigated based on the buying and supplying firms’ perspectives. The main goal is to contribute to a better understanding of the supplier development from a dyadic standpoint.

Method: This study is conducted from an interpretivism standpoint with the use of a deductive approach and qualitative strategy. A holistic multiple-case study of two plastic manufacturing firms as the buyers and their three main suppliers (three dyads) is applied in Iran. The empirical data is gathered via 6 different semi-structured interviews. The empirical evidence is analyzed by using within-case, cross-case and pattern matching analysis. The study considers the ethical issues; harm to participant, informed consents, invasion privacy and deception. The research quality is based upon trustworthiness and authenticity.
**Result, conclusion:** Thanks to within-case analysis which generates the dyadic view with respect to practices, success factors and barriers to supplier development, amazing result is achieved that rarely mentioned by the previous research. A number of conflicting views between the buying firm and the supplier is found due to dyadic investigation which demonstrates the gaps between the buyer and supplier’s perceptions in dyadic relationship.

The dyads are simultaneously involved in both direct and indirect supplier development practices. Based on the level of buying firm’s involvement in supplier development activities, the dyads partially follow the degree of sequence from low, moderate to high involvement levels. Each dyad can eliminate or keep the lower level of buyer’s involvement activities when they start the moderate and high level of buyer’s involvement practices. However, the specific position cannot be identified for a particular dyad and the supplier development activities are scattered in all three levels.

Based on the dyadic standpoint, the factors that contribute to success of the supplier development program in each dyad can be seen as buyer-, supplier-specific and interface success factors. In this regards, this dyadic multiple-case study confirms the reviewed literature associated with success factors and finds supplier’s top management support and previous supplier development experiences as the additional factors in supplier-specific area that contributes to the successful inter-firm relationship and the supplier development that are not pinpointed by the previous studies.

Barriers to the supplier development are factors which hinder the success of the supplier development program. According to the literature review, the barriers could be divided into buyer-, supplier-specific as well as buyer-supplier interface barriers. This study partially confirms the previous studies and reveals some surprising results. One of the most useful findings of the research is that only one barrier in buyer-specific category is verified by one of the dyadic cases. However, in addition to identified barriers, lack of supplier’s top management support and supplier’s indolence are seen as the supplementary supplier-specific barriers to the supplier development. Interestingly, there are other types of barriers that cannot be found in the previous research which is categorized as context barriers. This type includes those kinds of barriers that are originated in the context of relationship in a dyad.

**Key words:** Supplier Development, Dyadic Perspective, Supplier Development Practices, Success Factors, Barriers
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Hoda Soleymani Farokh Zadeh
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Abbreviations

This section underlines all the abbreviations and specific terms used in this study.

**EDI:** Electronic Data Interchange  
**ERP:** Enterprise Resource Planning  
**FOB:** Free On Board  
**HDPE:** High Density Polyethylene  
**NPD:** New Product Design  
**POS:** Point of Sales  
**PP:** Poly Propylene  
**R&D:** Research and Development  
**SC:** Supply Chain  
**SD:** Supplier Development  
**SCM:** Supply Chain Management  
**SM:** Supplier Management  
**SRM:** Supplier Relationship Management  
**TQM:** Total Quality Management
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1. **Introduction**

The introduction chapter gives an overview of the subject and the motivation for this thesis. It starts with a brief explanation about buyer-supplier relationships in supply chain management and specifically the supplier development concept from buyer and supplier perspectives. Furthermore, the problem statement gives an overall insight to the practice of supplier development between the studied firms, its success factors and barriers which are the issues being investigated.

1.1. **Background**

Companies have been faced with economic and industrial changes in the past two decades such as organization reengineering, downsizing, and thus focus on core competence has reformed supply chain (SC) structure (Yeh, 2008). Organizations have realized that they are a part of a larger system (Hau, 2010; New 2010) and delivering customer value at lowest cost is not only related to the activities, functions and processes within the organization itself but also to the entire SC (Koçoğlu *et al.*, 2011; Wu *et al.*, 2011; Hartley and Choi, 1996).

In this respect, Chan (2003, p. 534) emphasizes that “[t]he supply chain […] is a network of companies which influence each other”. Companies (buyers) seek continuously to reduce the cost of supplies from suppliers upstream and increase customer value to consumers downstream (Chima, 2007) thereby gaining competitive edge which ensures their existence on the global market (Carlin and Dowling, 1994).

1.1.1. **Buyer – Supplier Relationship**

In the last decades a strong development in outsourcing could be observed (Janda *et al.*, 2002). American multinationals outsourced their production to Asian countries and were imitated by European multinationals – Wall Mart, Mattel, Esquel, Addidas and Siemens (Hau, 2010). The globalization of the market situation and competition, demanding customers, rapid technological changes, low prices and decreasing product life cycles have forced organizations to focus on what they can do best while outsourcing other activities that are better performed by other firms (Arroyo-López *et al.*, 2012; Wu *et al.*, 2011).
The performance of suppliers has a great impact on the products of the buying firm (manufacturing or outsourcing firm) (Krause et al., 1998) so manufacturing firms are becoming more aware of working closely with suppliers (Talluri et al., 2010; Lawrence, 2004; Monczka et al., 1993).

Buying firms understand that they cannot limit themselves to their firm boundaries anymore as Wagner et al. (2011, p. 29) outline in their study that “The concept of fostering relational bonds leading to reliable repeat business has evolved to a concept of building long-term relationships among partners in a supply network”.

Consequently, to meet the ever-increasing market competition (Krause and Ellram, 1997a) and remain competitive, (Monczka et al., 1993) companies depend on the capabilities and performance of their suppliers (Arroyo-López et al., 2012; Talluri et al., 2010; Wagner 2010; Wagner, 2006a; Krause et al., 2000; Krause et al., 1998; Krause and Ellram, 1997a,b; Hartley and Choi, 1996). This dependence manifests the necessity of an effective management of the SCs (Carr and Kaynak, 2007; Krause et al., 1998).

It is worth noting that for each dollar a company earns on the sale of a product, it spends about 50% on purchase of raw material, components and services for the manufacturing of that product (Ferreira and Borenstein, 2012; Tully, 1995 cited in Krause et al., 1998; Galt and Dale, 1991; Lascelles and Dale, 1990) and this percentage is likely to rise due to the continuous outsourcing (Handfield et al., 2000). Therefore, much attention should be given to suppliers whose performances add to the competitive advantage of buying companies. Gadde and Snehota, (2000) as cited in Moeller et al. (2006, p. 71), point out: “Suppliers can do much more than delivering reasonable priced items on request”. As a result, enterprises seek to manage, develop as well as maintain their interactions with their suppliers i.e. buyer–supplier relationships. These relationships have to be in a cooperative mode which Kraues and Ellram (1997a) refer to as working jointly with suppliers in order to realize performance improvements and long-term mutual benefits (Li et al., 2012; Wagner and Krause, 2009; Wagner, 2000).
1.1.2. Supplier Development

Achieving cooperative inter-organizational relationship is a challenge for enterprises within the SC to meet the buying firm’s competitive needs (Krause et al., 1998). Shifting from transactional trade-off (Goffin et al., 2006) to cooperative-oriented purchasing between suppliers and buyers (Sánchez Rodríguez, 2009; Wagner, 2000; Krause et al., 1998) is a gateway to create and deliver value for customers (Moeller et al., 2006) and requires establishing supplier relationship.

In 1997, Global Business Study survey of North American firms mentioned that the companies seek for the better management of their supplier structures and almost 500 CEOs of large organizations consider supplier relationship management (SRM) as “most critically important” for the success of their company (Wagner, 2000, p. 21). The goal of SRM is to make the relationships between a buying firm and its suppliers more effective (Ferreira and Borenstein, 2012; Croxton et al., 2001) in order to optimize the portfolio of the suppliers (Moeller et al., 2006).

According to Wagner (2000), supplier management (SM) is one of the appropriate methods to reinforce SRM i.e. get the maximum benefit of potential advantages in buyer and supplier relationships. SM can be regarded as “the practice of planning, implementing, developing, and monitoring company relationships with current and potential suppliers” (Ibid, p. 21) or “organizing the optimal flow of high-quality, value-for-money materials or components to manufacturing companies from a suitable set of innovative suppliers” (Goffin, Szwejczewski and New, 1997 cited in Wagner, 2003) in order to meet sustainable competitive advantage.

As Arroyo-López et al. (2012, p. 681) point out; a crucial phase of SM considers the “potential [of] gradually changing the features or properties of the suppliers which can establish the supplier base, also called supplier development [SD]”. As supply chain management (SCM) focuses on generating and delivering customer value through the management of the relationships of a focal company and its suppliers as well as its customers (Christopher, 2005), SD can be regarded as one of the basic and critical concept in SCM (Bai and Sarkis, 2012; Mortensen and Arlbjørn, 2012). This is because an effective SCM synchronizes the flow of materials, components, products and
information along the SC (Krajewski and Ritzman, 2004 cited in Carr and Kaynak, 2007).

Most SD definitions consist of “suppliers’ capabilities and performance improvement” (Praxmarer-Carus et al., 2013; Arroyo-López et al., 2012; Li et al., 2012; Mortensen and Arlbjørn, 2012; Ghijsen et al., 2010; Sánchez-Rodríguez, 2009; Li et al., 2007; Handfield et al., 2000; Krause et al., 1998; Krause and Ellram, 1997 a,b; Hartley and Choi, 1996). Two outstanding definitions of SD that have influenced the work of most researchers are stated below and serve as the basis of this research.

“All effort of a buying firm with its supplier(s) to increase the performance and/or capabilities of the supplier and meet the buying firm's short- and/or long-term supply needs” (Krause and Ellram, 1997b, p. 21). However, Krause et al. (1998, p. 40) define SD a little more differently as “any set of activities undertaken by a buying firm to identify, measure and improve supplier performance and facilitate the continuous improvement of the overall value of goods and services supplied to the buying company’s business unit”.

Li et al. (2007) argue the above-mentioned improvement in supplier performance can take place within the unique exchange relationships developed between the buyer and its supplying firm(s). Since the performance of the buying firm is impacted by that of its suppliers (Krause et al., 1998) as stated above, this improvement in supplier performance should enable the buying firm to reap benefits from its SD efforts (Li et al., 2007). This explains why there is a growing interest in SD by businesses and scholars (Li et al., 2012).

1.1.3. Generic Visualization of the Study Object

SD might be implemented on a one-to-one basis between a buying firm and one or more of its suppliers (a dyadic relationship) or it may be a more ’global’ effort that takes place between a large customer firm and a group of its immediate suppliers i.e. supplier associations (Krause and Ellram, 1997b). According to Mortensen and Arlbjørn (2012), an inter-organizational perspective of SD indicates that content, process and structure are developed from a dyadic perspective i.e. buyer and its main and immediate supplier’s views. In this regard, SD is examined in this thesis in buyer-supplier dyads
i.e. the perspectives of buying firms and their main and immediate suppliers. Figure 1.1 below illustrates the portion of SC that is in focus in this thesis.

![Focused Perspective in Generic Supply Chain](image)

**Figure 1.1**: Focused Perspective in Generic Supply Chain  
*Source: Own Creation*

### 1.2. Problem Discussion

As buying firms become more aware of the necessity to work with suppliers to improve their performance and gain competitive advantage (Proxmarer-Carus *et al.*, 2013; Ghijsen *et al.*, 2010; Li *et al.*, 2007; Goffin *et al.*, 2006; Krause *et al.*, 1998; Krause and Ellram, 1997a, b), they are motivated to invest assets and resources in SD programs (Krause *et al.*, 1998). These investments can possibly lead to identifying suppliers for strategic partnerships. Consequently, SD programs are selective strategic investment processes requiring sustained commitment of the buying firm for the long-term in order to see any positive results (Talluri *et al.*, 2010).

Many manufacturing companies recognize the possibility of the strategic and long-term benefits of SD (Wagner, 2010). However, it is difficult for buying firms to find organized suppliers to satisfy their requirements (Carr and Kaynak, 2007; Krause and Ellram, 1997a). Consequently, buying firms turn to develop their suppliers through SD.
as one of the ways to enable the suppliers to improve their capabilities and capacities (Carr and Kaynak, 2007; Krause et al., 1998; Hartley and Choi, 1996). Buying firms as well as their respective suppliers that engage in any SD program should acknowledge what practices are going on in relation to SD and must realize those critical factors that could contribute to or hinder the success of any SD effort. In addition, they are in a dyadic relationship in which they express their views as shown below.

![Figure 1.2: Buyer and Supplier Perspectives in SD context](source: Own creation)

### 1.2.1. The Practice of Supplier Development

Effective competition of a company on the global market requires it to have a network of competent suppliers. By establishing a SD program, such a network can be achieved and sustained for the long-term as it improves the capabilities of the suppliers to respond positively to the always changing and increasing competitive demands of the buying firms (Hahn et al., 1990).

The necessity of SD to be sustained for the long-term in order to reap its benefits (Talluri et al., 2010; Wagner, 2010) requires collaboration of the buyer and its supplier in the dyadic relation from the inception to the long-term. Consequently, both buying firm and supplying firm must evolve together to satisfy the ever changing requirements of the buying firm. The practice of SD between these partners i.e. the application of SD activities between them with time is important to attain such benefits. Thus, it is good to know the story of what buyer and supplier have been doing in relation to SD (Terpend et al., 2008).

However, to the best of this researcher’s knowledge, there is little research literature available on the practice of SD between firms especially from a dyadic perspective.
Terpend et al. (2008) found in their research that only 6 articles of 151 reviewed treated the dyadic perspective of SD with buying firm and supplier responding to the concerns of SD. Thus, this research adds to the available literature on dyadic buyer-supplier investigations in SD. Furthermore, there is minimal attention to supplier’s standpoint in SD literature. This is supported by Nagati and Rebolledo (2013) and Mortensen and Arlbjørn (2012) who explain that most attention is devoted to the buying firms’ point of view, a perspective that can add valuable insight. According to investigations by Mortensen and Arlbjørn (2012) as well as Wouters et al. (2007), the existing literature review in respect of SD is mostly done based on surveys and questionnaires. Therefore, the above mentioned issues give the motivation to write the story of the practice of SD at least based on the buyer-supplier dyads of the companies in this research.

1.2.2. The Success Factors of Supplier Development

The purchasing function has an important role towards the operations strategy of a firm as it must ensure that the performance and capabilities of the suppliers are in line with the competitive strategies of the buying firm (Wagner, 2000; Krause et al., 1998). In this respect, SD is a good tool to adjust any deficiencies of the supplier (Krause et al., 1998). Li et al. (2012), Krause et al. (2000), Hartley and Choi (1996) and Hahn et al. (1990) state an increasing acknowledgement and consensus that SD is important and has a decisive role in improving the performance of buyers and suppliers. Thus, it has a strategic contribution to the effectiveness of buyer-supplier dyads.

However, it is necessary that the buying firm should consider the interest and view-point of suppliers so that the latter can be willing to participate in the SD activities. Thus, the buying firm has a higher possibility to motivate the supplier through development activities by also involving the suppliers’ views and motivations so as to increase the potential value of the buyer-supplier relationship (Mortensen and Arlbjørn, 2012).

These measures are good for overcoming suppliers’ reluctance to engage in these programs and assure a long-term perspective to the programs. This means that buying firms create and deliver customer value through realignment with their suppliers’ performance, capabilities and responsiveness in order to match the buyers’ requirements (Krause and Ellram, 1997a). Consequently, Sánchez-Rodríguez (2009), Nagati and
Rebolledo (2013) as well as Li et al. (2012) declare, that both buyers and supplier play a vital role to meet their overall goals and gain competitive advantage in the market.

The result of using SD programs is the high availability of products, better delivery speed or on-time delivery, reliability and cooperation in product design (Carr and Kaynak, 2007; Krause et al., 1998; Hartley and Choi, 1996). This reduces uncertainty in the operations of buying firms thereby decreasing long-term transaction cost. Buyer-supplier long-term partnerships built in SD programs and business dealings discourage opportunistic supplier behaviors (Li et al., 2012).

Since buyer and supplier play important roles to meet their overall goals through SD programs that result in success and benefits to the dyads, the arising problem is to identify the contributors or enablers to the success of such a program in the buyer supplier dyads under study.

1.2.3. The Barriers to Supplier Development

Krause and Ellram (1997a) as well as Mortensen and Arlbjørn (2012) first suggest that firms that are satisfied in their SD commitment seem to be those that communicate more effectively with suppliers and invest the necessary resources and willingness in SD activities that include supplier evaluation, supplier training and supplier award programs. However, they also emphasize that deficiency in effective communication is a barrier to SD as well as the lack of buying firm credibility.

Lawrence, (2005) as cited in Praxmarer-Carus et al. (2013), observes that buyers do not usually incorporate the expectations of the suppliers in deciding on SD programs or seek the feedback from them even though supplier satisfaction is a major determinant of a profound and quality relationship that contributes to the buyers’ performance.

Krause and Ellram (1997a) state that the lack of buying firm power (percentage of suppliers output purchased by the buying firm) constitutes a serious reason why suppliers are reluctant to engage in SD efforts. According to Talluri et al. (2010), buying firms are usually reluctant to invest in SD for the following reasons:

i. Lack of immediate return from the investment.

ii. For an unsuccessful buyer-supplier relationship, the benefits may not counterbalance the incurred expenses.
iii. SD programs are useful depending on the already acquired capabilities of the suppliers and the buyers’ effectiveness in financing the programs. This means that returns from the programs may vary from one supplier to the other leading to risk arising from uncertain returns.

Ghijsen et al. (2010) summarize that implementing a SD program does not necessarily bring successful results to the buyer-supplier dyads. Thus, the difficulties that can bring failure in SD in the studied dyads need to be identified to enable the search for solutions. All the above problems make it interesting to study and understand the practice, the success factors and the barriers to SD programs in the studied firms from the buyers and suppliers’ perspectives. These dyadic (buyer and supplier) stories and views of SD in the case companies constitute the main specificity and contribution of this study.

1.3. Research Questions (RQs)

In view of the above explanations and problems, it is important to investigate the link or influence of SD to the success or outcomes for the supplier and buying company.

- **RQ 1.** What are the practices of supplier development from the buyer and supplier’s perspectives?

- **RQ 2.** What factors lead to a successful supplier development program from buyer and supplier’s perspectives?

- **RQ 3.** What are the barriers to supplier development from buyer and supplier’s perspectives?

1.4. Purpose

Following the problem statement and research questions above, the purpose of this research is to identify and describe the practices of SD in buyer-supplier dyads as well as the success factors of the SD program in the buying and supplying firms. This is achieved by investigating SD from the perspectives of the buying firms and their suppliers’ respectively. This dyadic case study approach contributes to the uniqueness of this research. The barriers to the SD programs are also investigated based on the buying
and supplying firms’ perspectives. The goal is to contribute to a better understanding of the SD from a dyadic standpoint.
1.5. Disposition of the Research

This chapter introduces and describes the background of the supplier development from both buyer and supplier perspectives respectively as well as it discusses the problem statement which subsequently leads into research questions. The chapter ends with the formulation of the research purpose and disposition.

This chapter describes different research philosophies and tradition. Important aspects such as research strategies, approaches, design, empirical data collection and the research elements such as trustworthiness and authenticity will be explained. The importance and the selection of the aspects described are motivated by the author’s explanation.

Since this paper has relied on a deductive approach, it is seen appropriate to explain all parts of the literature review first before the empirical data collection. This section presents the relevant theory gained from the scientific articles associated with the purpose and research questions.

In this chapter, two plastic products manufacturers (Focal Companies), three suppliers have been interviewed based on the existence of SD efforts within their relationship. This chapter starts with a brief company presentation, which is followed by a presentation of all the collected data for each dyad.

This chapter is dedicated to analyze the empirical results of this thesis. First, within-case analysis is applied to create a dyadic view of each studied case and then is followed by cross-case and pattern matching analysis in order to find out the similarities and differences between dyads based on the scope of reviewed literature.

This chapter provides a summary of the results achieved and answers to research questions. It underlines theoretical and practical contributions, followed by limitations and suggestions for further studies.

Figure 1.3: Deposition of the Research
Source: Own Creation
2. Methodology

This chapter deals with the general ideas that govern every research. It is concerned with the philosophy of the research, the research strategy, the approach, the design, the sampling method, the data collection and the research quality. It also shows how each of these is applied or respected in this research in relation to supplier development. The justification for the use of any strategy approach or method in this research is also given in this chapter. A map showing the systematic flow of ideas closes the chapter.

2.1. Research Philosophy

Research is a building block in understanding and taking decisions on important and even basic everyday phenomena and issues (Ghauri and Grønhaug, 2005). In this regard, Saunders et al. (2009, p. 5) define research as “something that people undertake in order to find out things in a systematic way, thereby increasing their knowledge”. Thus, research philosophy can be regarded as a tool that is used to make the link between the development of knowledge and the nature of that knowledge in a specific field. In other words, the researcher’s viewpoint in terms of the relationship between knowledge and the process of its development affects the philosophy that the researcher tends to choose (Ibid).

The nature of knowledge and its development are based on the ontological and epistemological assumptions we make of it (Saunders et al., 2009). Ontology is the assumptions we make about the way the world works i.e. assumptions about the nature of reality or the truth while epistemology refers to what we consider as acceptable knowledge in a particular field of study or what knowledge we have of the realities in the world. Consequently, research philosophy enhances the researcher’s understanding of his or her research approach and framework in a particular fieldwork (Ibid). According to Bryman and Bell (2011) there are two research philosophies in respect of epistemological considerations which are positivism and interpretivism.

2.1.1. Positivism

According to Durkheim (1964), as cited in May (1997) as well as Bryman and Bell (2011), the positivist perspective studies the social reality in the same way as natural
scientists e.g. the physicist, chemist or physiologist. The term objectivity is defined by positivism i.e. positivists observe and explain natural science and social life objectively in the same way as natural phenomena (May, 1997). They exclude themselves from the topic, describe and anticipate behavior of the phenomena based on empirical data collection on the social environment, and “produce a set of true, precise and wide-ranging laws” (Ibid, p. 10). He describes that in this process, positivists explain human behavior in terms of cause and effect.

2.1.2. Interpretivism

According to Bryman and Bell (2011, p. 17) interpretivism is “an alternative to the positivist orthodoxy”. They mention that studying people and their institutions is different from natural science and demands a kind of logic to explain the distinctiveness of humans. Interpretivism argues that the social worlds of business and management are more complex to put them in generalized principles like physical science. Interpretation is shaped according to the researcher’s set of meanings that he or she gives to the world. Furthermore, some authors claim that the interpretivism perspective is appropriate in business and management research (Saunders et al., 2009).

Prasad (2005) defines five interpretive traditions; Symbolic Interactionism (searching for self and meaning), Hermeneutics (the interpretation of texts), Dramaturgy and Dramatism (social life as theater and stage), ethnomethodology (the accomplishment of ordinary lives) and ethnography (cultural understandings of natives). The tradition in interpretivism used in this research is hermeneutics.

The linguistic root of Hermeneutics is from the Greek word hermeneutikos, meaning “the process of clarifying and explaining, with the intent of making the obscure more obvious” (Bauman, 1978 cited in Prasad, 2005, p. 31). According to Bryman and Bell (2011) the term Hermeneutics in social science can be regarded as a method for interpreting human actions. Further, Prasad (2005, p. 38) mentions that “hermeneutics is centrally concerned with texts, over and above human action and conversation”. In this respect, she asserts that the philosophy of hermeneutics considers text and interpretation through the central concepts in this tradition which are the hermeneutic circle (the part can be understood from the whole and vice versa), layers of texts (go beyond the text’s obvious meaning and get its hidden meaning), relating to text (make a relationship
between text and interpreters) and *authors intentionality* (a text is more than its author’s voice). In short, “hermeneutics is the study of understanding especially the task of understanding texts” (Palmer, 1988. p. 8).

2.1.3. Motivation for using the Hermeneutic Tradition of the Interpretive Philosophy

In studying SD in this research, it is necessary to observe the buying firm and its immediate and critical supplier(s) collaboration from their perspectives. In order to investigate the success factors and barriers in SD, it is essential to understand the meaning of SD through the interpretive lens. The intention is to describe and interpret the meaning given to SD by the actors involved i.e. the buyer and its supplier(s). This is supported by Williams (2000, p. 210) who considers interpretivism in order to interpret “the meaning and actions of actors according to their own subjective frame of reference”. Given that this research contributes to the knowledge on SD, the relationship between buyer and its supplier(s) has to be taken into consideration.

According to the hermeneutics tradition, the two types of texts for consideration are text as an actual text and text as a metaphor. In contemporary social science, an actual text can be regarded as an electronic mail, financial statements, minutes of meetings, agendas of official letter, instruction, etc. Text as a metaphor can for instance relate to a ballet performance, a picture, a marketing presentation or a meeting in an organization etc. which could be treated and analyzed as if they were texts (Prasad, 2005). In this respect, Bryman and Bell (2011) assert that hermeneutics can be regarded as a strategy that establishes a relationship between texts as documents and social actions and other non–documentary phenomena. It is vital to consider the relationship between understanding the text from its author’s perspective and the social and historical context of its production (Ibid).

It is noticeable that there is no precise framework that Prasad (2005, p. 39) named as “sets of formulas and protocols”. It means that each researcher can have his or her own unique path in analyzing and interpreting according to the nature of the text and its context. Thus, researchers using this tradition have an open role while solving their research problems. This tradition also implies that the researcher gets closer to the research object based on the understanding of the actors where thoughts, impressions
and knowledge of the researcher is considered as an asset in order to interpret and understand the research problem (Ibid). These facts constitute the motivation for using hermeneutics in studying SD in the studied dyads. This means that the views of buyer and suppliers in dyadic relations as the actors in SD are registered as text while this researcher applies the freedom from hermeneutics to analyze and interpret these views.

2.2. Research Strategies: Quantitative and Qualitative Research

In doing research, a researcher should decide what kind of data and information collection strategies can be appropriate in order to answer the research questions in a particular research area and purpose. Thus, method selection depends on research problem, research questions as well as the researcher’s judgment (Saunders et al., 2009). Bryman and Bell (2011), define two main strategies in terms of broad orientation to business and management research: qualitative and quantitative. It is noticeable that these two methods can be mixed in order to reinforce their strengths and offset the weaknesses to some extent. However, such integration is not acceptable for all writers in research method (Ibid). Saunders et al. (2009) consider research strategy as data collection techniques and data analysis procedures.

2.2.1. Quantitative Strategy

According to Bryman and Bell (2011), quantitative research refers to quantification in the data collection and the relevant analysis as well as measurement engagement. It consists of a deductive approach in order to reveal a relationship between research and theory and testing that theory. Using quantitative data and applying statistical criteria provides hypotheses test with objectivity since numbers are not influenced by the researcher’s opinion i.e. there is no interpretation (Hair et al., 2003). Moreover, it has mostly positivistic perspective and includes norms of the natural science model with view of social reality as an external aspect (Bryman and Bell, 2011).

2.2.2. Qualitative Strategy

Qualitative research refers to descriptive data such as interviews, documents and participant observation to understand and explain social phenomena (Meyers, 1997). In other words, the qualitative method emphasizes on social processes and not social
structures and refers to a “mixture of the rational, explorative and intuitive where the skills and experience of the researcher play an important role in the analysis of data” (Ghauri and Grønhaug, 2005, p. 110). It is worth noting that subjective that the opinion of researcher is engaged in qualitative study in order to “resolve any ambiguous meaning” (Hair et al., 2003, p.74).

Qualitative research mostly focuses on the inductive approach to make the relationship between research and theory as well as the generation of theories (Bryman and Bell, 2011). Moreover, it emphasizes on meaningfulness of the study and thus is not impressionistic (Taylor and Bogdan, 1998). It is a way to find out how individuals perceive their social world and consists of “viewing social reality as a constantly shifting emergent property of individuals’ creation” (Bryman and Bell, 2011, p. 27). This means that a researcher in this strategy mostly looks at the social world through the eyes of people and interprets it from the perspective of people being studied.

As foreshadowed briefly, qualitative methods tend to generate theory rather than testing it (Ibid). However, Silverman (1993), as cited in Bryman and Bell (2011), argues that recently the qualitative research strategy is used in testing theories which reflects the growing maturity of this strategy. The differences between quantitative and qualitative strategies are shown in the table below:

<table>
<thead>
<tr>
<th>Qualitative Methods</th>
<th>Quantitative Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Emphasis on understanding</td>
<td>• Emphasis on testing and verification</td>
</tr>
<tr>
<td>• Focus on understanding from interviewee's/information's point of view</td>
<td>• Focus on facts and/or reasons for social events /Point of view of researcher</td>
</tr>
<tr>
<td>/Point of view of participants</td>
<td></td>
</tr>
<tr>
<td>• Observations and measurements in natural settings (Words)</td>
<td>• Controlled measurement (Numbers)</td>
</tr>
<tr>
<td>• Subjective 'insider view' and closeness to data (Researcher close)</td>
<td>• Objective 'outsider view' distant from data (Researcher distance)</td>
</tr>
<tr>
<td>• Process oriented</td>
<td>• Result oriented (Static)</td>
</tr>
<tr>
<td>• Explorative orientation</td>
<td>• Hypothetical–deductive, focus on hypothesis testing</td>
</tr>
<tr>
<td>• Holistic perspective</td>
<td>• Particularistic and analytical</td>
</tr>
<tr>
<td>• Generalization by comparison of properties and contexts of individual organism</td>
<td>• Generalization by population membership</td>
</tr>
<tr>
<td>(Contextual understanding)</td>
<td></td>
</tr>
<tr>
<td>• Rich, deep data</td>
<td>• Hard, reliable data</td>
</tr>
<tr>
<td>• Micro (small–scale aspects of social reality)</td>
<td>• Macro (large–scale aspects of social trends)</td>
</tr>
</tbody>
</table>
Table 2.1: Differences between Qualitative and Quantitative Strategies

Source: Ghauri and Grønhaug (2005, p. 110); Bryman and Bell (2011, p. 410); (Hair et al., 2003, p. 76)

2.2.3. Motivation for doing a Qualitative Research

The qualitative approach can be used when a researcher tends to uncover and understand a phenomenon in which knowledge about the field is not ample. Additionally, qualitative research is done due to previous experience and skills of the researcher and for context discovery (Ghauri and Grønhaug, 2005). These arguments constitute the justification for the use of the qualitative strategy to investigate SD based on the author’s own experience which has gained during the work in a plastic manufacturing company (buying firm) and respective suppliers as well as subjective and limited knowledge. Moreover, according to Strauss and Corbin (1990), as cited in Ghauri and Grønhaug (2005), qualitative method is highly appropriate for studying organizations, groups and individuals. In respect of this view, qualitative method is applied in this research to study SD in buying firms and their supplying firms in a dyadic manner. Prasad (2005, p. 31) affirms that “with the growing interest in qualitative and other naturalistic forms of inquiry, hermeneutics has begun to exert a strong influence on the social science”.

Furthermore, the qualitative approach in this research allows for deep and rich descriptive data in order to identify and present the success factors and the barriers in SD which is a view supported by Bryman and Bell (2011). In this respect, Hair et al. (2003) also state that qualitative methods are suitable for a deeper understanding in order to discover hidden motivation, values and information on a few characteristics. In addition, Taylor and Bogdan (1998, p. 10) assert that qualitative research is a “craft”. It refers to unique and non–standardized nature of research that allows the researcher to be flexible about conducting the studies. This research makes use of such flexibility in
interviews to carefully craft and map out the practices, success factors and barriers of SD in the studied dyads.

Betti (n.d.) as cited in Palmer (1988) asserts that individual parts structure the whole i.e. in order to catch the whole meaning of the context as in hermeneutics, it is vital to deeply understand the individual’s meaning. Schleiermacher, (n.d.) as cited in Palmer (1988) gives the hermeneutical circle which illustrates the reciprocal interaction between the meaning of every individual part and the meaning of the context i.e. the whole. For this reason, the success factors and barriers of SD in each dyad are investigated by questioning the individual partners i.e. the buying firm and the first tier suppliers. The combined views provide the situation of SD in the context of the dyad.

Hermeneutical practice does not see the context as separate from the interpreter’s horizon. The relationship between understanding and lived experience is important in human studies (Palmer, 1988). The explanation here is that it is not possible for the interpreter to see itself apart from its own pre–understanding of the study and fieldwork thus, the initial understanding of this researcher on SD plays a role on the interpretation of the collected data.

2.3. Research Approach Theory: Inductive vs. Deductive

According to Bryman and Bell (2011), there is an important factor in terms of the relationship between theory and research. Ghauri and Grønhaug (2005) mention that the two main ways of establishing what is true or false and to draw conclusions are induction and deduction.

2.3.1. Induction– Building Theory

The emphasis in the inductive approach is on generating theories from collected empirical observation and as evidence in improving existing theories (Ghauri and Grønhaug, 2005) i.e. theory is the outcome of research (Bryman and Bell, 2011). The process starts from assumptions to conclusions as follows: observations ➔ findings ➔ theory building/formulation i.e. theory follows data (Bryman and Bell, 2011; Ghauri and Grønhaug, 2005; Saunders et al., 2009). However, Ghauri and Grønhaug (2005) discuss
that researchers cannot be 100 per cent sure in respect of inductive conclusions, e.g. election result.

2.3.2. Deduction – Testing Theory

According to Bryman and Bell (2011), deductive theory is the most common relationship between research and theory. Deduction refers to achieving the conclusion through logical reasoning i.e. “it needs not be true in reality, but it is logical” (Ghauri and Gronhaug, 2005, p. 15). Deduction is concerned with testing and developing theory rather than building or generating it and tends to explain the relationship between variables (Saunders et al., 2009) which means: theory ➔ observations ➔ findings case (Bryman and Bell, 2011). Deduction involves several steps with a clear and logical sequence. However, the last step of this process i.e. revision of theory, can involve induction (Ibid).

It is noticeable that deductive approach is mostly used in quantitative research through quantitative data collection and inductive approach is applied in qualitative research. However, Sanders et al. (2009, p. 124) believe that “such labeling is potentially misleading and of no real practical value” and thus, both approaches can be used in quantitative or qualitative methods. Further, Bryman and Bell (2011, p. 14) argue that there is no clear distinction between deduction and induction and that it is a matter of tendency rather than a “hard–and–fast distinction” due to the relationship between the nature of theory and research in terms of the research topic or area. The Table below reveals the main differences between deductive and inductive research approaches.

<table>
<thead>
<tr>
<th>Deduction emphasis</th>
<th>Induction emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Scientific principles</td>
<td>• Gaining an understanding of the meanings humans attach to events</td>
</tr>
<tr>
<td>• Moving from theory to data</td>
<td>• A close understanding of the research context</td>
</tr>
<tr>
<td>• The collection of quantitative data</td>
<td>• The collection of qualitative data</td>
</tr>
<tr>
<td>• The application of controls to ensure validity of data</td>
<td>• A more flexible structure to permit changes of research emphasis as the research progresses</td>
</tr>
<tr>
<td>• The operationalization of concepts to ensure clarity of definition</td>
<td>• A realization that the researcher is part of the research process</td>
</tr>
<tr>
<td>• A highly structured research</td>
<td>• Less concern with the need to generalize</td>
</tr>
</tbody>
</table>
• Researcher independence of what is being researched
• The necessity to select samples of sufficient in order to generalize conclusion

| Table 2.2: Major Differences between Deductive and Inductive Research Approaches | Source: Saunders et al. (2009, p. 127) |

2.3.3. Motivation for using a Deductive Approach

This research is followed mainly a deductive tendency i.e. the theory of the research is constructed from existing research literature on SD derived from scientific articles and then tested by collecting empirical data from buyer and its supplier(s) in the area of SD. This is supported by Bryman and Bell (2011, p. 13) who argue that “… not only does much qualitative research not generate theory, but also theory is often used as a background to qualitative investigations”.

2.4. Research Design

Bryman and Bell (2011) identifies the following research designs: experimental, cross–sectional or social survey, longitudinal design, case study and comparative design. This research is a qualitative case–study design with a perspective of both buying firms and its first tier and key supplier(s). Case study can be regarded as a research strategy on a particular phenomenon in real life based on empirical investigation (Robson, 2002 cited in Saunders et al., 2009) which in this research is SD. This is very common in business research (Eisenhardt and Graebner, 2007 cited in Bryman and Bell, 2011). Case study strategy also provides a deep understanding of the context of a research. It focuses on existing events and gives answers to the “how” and “why” research questions (Yin, 2012).

In this respect, Yin (2009, p. 18) presents the following definition of case study as a research design: “A case study is an inquiry that investigates a contemporary phenomenon in depth and within its real–life context, especially when the boundaries between phenomenon and context are not clearly evident”. Therefore, case study investigates the context and complexity of the cases in order to achieve a better understanding of the condition (Ibid). The case can consist of organizations, individuals, processes, programs, institutions, events, etc. (Yin, 2012).
According to Yin (2009, p. 46), there are four types of case study designs: single–case holistic, multiple–case holistic, single–case embedded and multiple–case embedded as shown in the figure below.

**Figure 2.1:** Basic Types of Designs for case studies  
*Source: Yin (2009, p. 46)*

### 2.4.1. Motivation for doing a Multiple-Case Study Research

For a better description of SD practices and in-depth understanding of the success factors and barriers of SD, this research focuses on holistic multiple-case study research design from the standpoint of the buying firms as well as its immediate and main suppliers which together form the case dyads. This enables a good analysis because
multiple-case study provides more data than single-case study. Consequently, the more data collected from the real world situation the better the analysis for a reliable conclusion. In studying SD in dyadic relations, the different companies have different explanations of the success factors and barriers thus, revealing diverse reasons for success or failure of SD programs as supported by Bryman and Bell (2011). It is worth noting that each case in this research consists of a dyad made of the buying firm and each of its main suppliers.

Hermeneutics’ emphasizes on history and true meaning i.e. authentic message and context as a whole (Prasad, 2005). As a result, the design of this research is sensitive to the historical activities and experiences that the cases have in terms of the SD. According to Gadamer’s (n.d.) hermeneutics as cited in Palmer (1988), the history is not finished and the past is a stream of facts through which we achieve our understanding. Context enables answers to what factors lead companies to have a perfect collaboration with their main suppliers or what kind of weaknesses hinder such collaboration. Context also means the real world collaboration of buyers and their suppliers.

2.5. Sampling

The problem to be solved in a business research is given an answer by collecting data. Such data collection requires contacting the people who have ample knowledge about the research topic. In this regard, touching all the knowledgeable people (total of all the elements with common characteristics) may not be feasible in terms of cost and time. Thus, sampling design is a part of the research process which facilitates investigating a small subset of the population to derive conclusions about the characteristics of the population (Hair et al., 2003).

2.5.1. Types of Sampling

According to Bryman and Bell (2011), there are two main types of sampling: probability and non–probability sampling methods. The probability sampling refers to a random selection from the population and thus, a researcher has the opportunity to generalize the findings derived from the random sample of the population. In other words, the researcher gives equal chance to each sample unit to be selected for further investigation (Bryman and Bell, 2011; Ghauri and Grønhaug, 2005). The non–probability sampling is
“an umbrella term to capture all forms of sampling that are not conducted according to the canons of probability sampling” (Bryman and Bell, 2011, p. 190). In this case, the researcher makes a judgment in the selection process in order to pick up a unit of sample (member of the population) with a higher chance compared with others (Hair et al., 2003). This research employs the non-probability sampling type since probability sampling is not fit qualitative research especially if it is based on interviews (Bryman and Bell, 2011).

2.5.2. Non–probability Sampling Types

Bryman and Bell (2011, p. 190) categorize the non–probability sampling into four types: the convenience sample, the snowball sample, the quota sample and the Purposive sampling.

Convenience sampling is the most common and important sampling in business and management research. Convenience sampling can be used due to its availability and accessibility in terms of sample elements that can provide the required information (Bryman and Bell, 2011; Hair et al., 2003).

Snowball sampling is a kind of convenience sampling and is more appropriate in qualitative strategy than in quantitative with statistical sampling. In this kind of sampling, a researcher makes an initial contact with a small group of relevant people in order to establish a connection with others (Bryman and Bell, 2011). Furthermore, there is no accurate extent of the population in this kind of sampling and thus “there is no accessible sampling frame for the population from which the sample is to be taken” (Ibid, p. 193).

Quota sampling is mostly used in marketing and commercial research. It provides with a reflection of a population in terms of the relative proportion of people in different categories e.g. gender, age groups and ethnicity. Thus, the research population is divided into different categories and a researcher determines the number of people in each group as well as the number in each category who should be interviewed (Bryman and Bell, 2011).

Purposive sampling refers to choosing sample intentionally in a strategic way by a researcher. This kind of sampling is used specifically in qualitative research. Since, the
researcher might seek to a particular characteristic in his or her cases/participants and relevant to research topic as well as research questions. The researcher is sensitive to his or her purpose and thus, the selection is conducted by purpose. It is noteworthy that strategic sampling differs from convenience sampling since researcher touches a convenience sample through chance. It should be borne in mind that snowball sampling and theoretical samplings are “examples of purposive sampling in qualitative research” (Bryman and Bell, 2011, p. 442).

2.5.3. Motivation for doing a Non-Probability Sampling

This research employs the non–probability sampling type because it deals with a few specific buyer-supplier dyads which does not allow for generalization as with the probability sampling. Furthermore, non–probability sampling is in the line with the qualitative strategy of this thesis according to the author’s personal experience and pre-judgment (Hair et al., 2003).

It is also important to work with buying firms that have some form of SD with their suppliers so as to ease the investigation of describing SD practice as well as identifying respective success factors and barriers based on dyads’ perspectives. According to the author’s understanding of SD as well as the feasibility to use own pre-judgment in the selection process (Hair et al., 2003), the departments or personnel that deal with purchasing for the buying firm and sales for the supplying firm(s) as well as senior management are most appropriate for the interviews because according to Bryman and Bell (2011), the respondents should have a general and comprehensive knowledge and information. This research is conducted by a mixture of snowball and purposive sampling.

Snowball sampling mostly refers to the topic of research i.e. SD, country and industry choices. Since the author was working in this industry, an appropriate connection with plastic manufacturing companies (buyers) established in order to recognize and contact their first tier and critical supplier(s). The pre-understanding of SD as well as the personal experience of the author also is supported by concept of Hermeneutics. This experience provides sort of prior understanding in order discover the underlying meaning and organizational realities as Prasad (1995) names it ideological texts. Moreover, language is not apart from thought and it is a bridge between understanding
and thoughts. Heidegger (n.d.) as cited in Palmer (1988) believes that understanding itself is the basis for all interpretation. Therefore, understanding people with my own mother tongue eliminates the obstacle of different language in interview phases. However, translating i.e. interpreting the truth and real meaning through bridging the gap between two languages is still remained for the researcher (Palmer, 1988).

Not just only snowball sampling is used to select Iran as a country choice and plastic production as industry choice of this research. Partly, it is also based upon purposive sampling and strategic reasons. Iran is chosen due to its unstable economic situation which cannot follow all pre-schedule and precise protocol in dyadic relationship between a buyer and its supplier(s). Further, previous research is mostly conducted in western countries (Li et al., 2012; Wouters et al., 2007) which make Iran more interesting to study. Further, in plastic production industry, the demand is mainly divided into two categories; plastic raw material which is supplied by governmental suppliers in Iran and, machineries and other components which are supplied by private sectors. This differentiation of suppliers’ nature expects different SD practices followed by different success factors and barriers.

In this research, two plastic manufactures are chosen according to purposive sampling. Since, they are active and dominant in in this industry for a long time and therefore, they are well-experienced and have found their positions well. This enabled them to touch the market and discover their demands and consequently their critical suppliers. Additionally, the collaboration with suppliers has two different faces which may not be popular in all manufacturing companies. The supplying firms for plastic granulate material are national (local suppliers) and for machines is international (foreign suppliers). This requires two different perspectives from the buying firm’s perspective in terms of SD practice as well as success factors and pitfalls.

Two manufacturers i.e. the focal companies that have been selected according to abovementioned sampling types, fit into the research questions and scope of this study. They were personally contacted through telephone to explain the research idea and determine the existence of any collaboration i.e. SD efforts between each buyer and its immediate supplier(s). The names of the main suppliers were obtained from each focal company and then the next contacts were applied to set interview sessions with all the companies in Iran. The buying firms’ respondents are managing directors; Mr. Seyed
2.6. Data collection in Qualitative Strategy

It is crucial that the researcher understands the problem and the research question before the start of data and information collection and then decides on the appropriate data collection approach to use in the study. It is not always clear to the researcher, which approach to use. For this reason, the researcher must pay extra attention regarding the selection of an approach. The reliability of the chosen approach is often questionable, thus, specific reasons are given on the assortment of the following categories of data collections (Patel and Davidson, 2003).

2.6.1. Primary and Secondary Data/Sources

Primary data is produced as a direct record of an event or process by a witness or subject involved in it while a primary source is a document or object written or created during the production of primary data. Research articles published by academic and research journals are examples of this type of source (Cohen et al., 2011; Creswell, 2011).

Secondary data is data that is taken from primary source documents. Secondary source literature is literature which summarizes primary sources. It is not the direct material published by the original researcher or the creator of the idea. Examples of secondary sources are handbooks, encyclopedias and selected journals that summarize research such as the review of the educational research. An easy approach to obtain secondary data and save time is to physically search in an academic library or access computerized databases. Literature reviews often contain both primary and secondary source materials (Creswell, 2011).
2.6.2. Motivation for Using Primary and Secondary Data/Source

The lack of literature on SD in the studied dyads necessitates the collection of primary data. This research reports primary data in the empirical section which gives the original ideas and present the viewpoints of the actors in SD. The primary data is gotten through interviews that were conducted with the companies in each of three dyads. Primary sources such as scientific articles also provide the details in the literature review. In addition, secondary data is used to explain the practices of SD in the studied dyads.

2.6.3. Interview

According to Bryman and Bell (2011) and Ghauri and Grønhaug (2005), interview is the most common and attractive method to collect qualitative data. Interview requires interaction between the researcher and the respondent (Ghauri and Grønhaug, 2005). Bryman and Bell (2011) outline different types of interview which are associated with qualitative research. However, two types of interview in qualitative research are dominant: Semi-structured interview, unstructured interview.

Semi-structured interview refers to a list and themes of questions that should cover the research topic (interview guide) that might differ from interview to interview (Bryman and Bell, 2011; Saunders et al., 2009). Depending on interview’s atmosphere and interviewee’s response, some questions can be omitted, varied and even added by the interviewer during the interview i.e. the flexibility of interview process (Bryman and Bell, 2011). It should be noted that this kind of interview is suitable for a clear focus on the research topic rather than being general and therefore more precise and specific issues should be examined (Ibid).

Unstructured interview is somehow similar in character to a conversation (Burgess, 1984 cited in Bryman and Bell, 2011) and is informal (Saunders et al., 2009). It means that a researcher presents a question (a clear idea) or limited questions in respect of the topic and the interviewee answers freely about events, behavior and beliefs on the particular issue and respective aspects of it (Bryman and Bell, 2011; Saunders et al., 2009, Ghauri and Grønhaug, 2005). Further, the interviewer leads the questioning and records the answers in order to later understand the “how and why” questions (Ghauri and Grønhaug, 2005). In this respect, unstructured interview is a helpful method for
context discovery (Ghauri and Grønhaug, 2005). Bryman and Bell (2011, p. 472) point out that this method is appropriate for gaining “a genuine understanding of the world views of members of a social setting or of people sharing common attributes”.

2.6.4. Motivation for using the Semi-structured Interview

This research is conducted based on semi–structured interviews with buying firms and their respective direct and critical suppliers for the sake of focusing on the topic rather than being general. This gives the opportunity to explore precise and specific issues regarding the topic (Bryman and Bell, 2011). This method is also appropriate for a multiple-case study research especially in this situation of dyadic relations as it permits each respondent to state its view while follow up questions lead to greater insight of the issues on the topic (Saunders et al., 2009; Bryman and Bell, 2011). It equally permits the researcher to compare issues across the cases (Bryman and Bell, 2011). From the perspective of hermeneutics, it is essential to be a good listener during the interviews and recognize what is not said (Palmer, 1988) to understand insight nature of the context (Prasad, 1995).

Six two-hour interviews were applied with the two buying firms and respective suppliers during weeks 15 and 16/2013. As one of the buyers- Persian Sanat Baharestan MFG Co. has two suppliers, its perspective for each supplier- the petrochemical company and Tederic Machinery Co., Ltd., was asked in separate interview sessions. The interview questions were translated and conducted in Persian language. Then transcripts of the interviews were submitted to each respondent through fax to validate the researcher’s interpretation feedback, impression and findings. Afterwards, the transcripts were translated to English. The interviews took place in Iran in the respondent’s office of each company through face- to-face appointments.

2.7. Data Analysis

The qualitative data collected from interviews should always be summarized and categorized or restructured as a narrative to use for analysis (Saunders et al., 2009). The interpretation of the data is based on the participants’ definitions of the researched phenomenon (Cohen et al., 2011). They also indicate that there is no standardized rule for analyzing qualitative data. Furthermore, Yin (2012) emphasizes that in spite of
statistical analysis, there are no formulated tools or cookbook recipes for analyzing case study data and mostly it depends on a researcher’s style of empirical thinking.

2.7.1. General Analytic Strategy

Yin (2009) regards all empirical research studies including case studies as a story, which embraces collected data and so has a beginning, body and an end. He views the general analytic strategy as a guide to craft the story and conduct a case study analysis. In this regard, he presents four strategies, which enable researchers to treat the evidence fairly and produce convenient analytic conclusion. These include relying on theoretical proposition, developing a case description, using both qualitative and quantitative data and examining rival explanations. This research employs theoretical proposition strategy for the reason explained below.

The choice of this strategy is directed by the fact that the original objectives and design of the case study are based on theoretical propositions, which shape the data collection plan. Such proposition can be seen in the research questions and literature review (Yin, 2009).

Since this research is conducted on a deductive approach, the author uses theory as a framework for organizing the data collection and the analysis. Yin (2012 and 2009) note that relying on theoretical propositions focuses on specific data which in this context of SD is practices, success factors and barriers from the viewpoints of buying firms and their suppliers thereby ignoring other irrelevant data. This helps the researcher to organize the entire case study and determine interpretations.

2.7.2. Analytic Techniques

Analytic techniques underlie (support) analytic strategies because a strategy eases the proceedings of a case study analysis thus analytic techniques reinforce a researcher’s abilities to analyze. Five analytic techniques for case study analysis have been identified (Yin, 2009) and explained below.

*Pattern Matching* compares an empirically based pattern with a predicted one. If the patterns match, then the result reinforces internal validity of the case study. In explanatory cases, the pattern is related to the dependent or the independent variable or
both. In descriptive cases, the predicted pattern of certain variables should be defined before data collection in order to do pattern matching (Ibid).

**Explanation Building** is a special type of pattern matching. However, its procedure is more difficult as it requires the building of an explanation (mostly in narrative form) about the case. Since narratives might not be accurate, case studies are better with explanations that reflect some theoretically significant propositions (Ibid).

**Time-Series Analysis** is analogous to the time-series analysis conducted in experiments and quasi-experiments. This technique follows intricate patterns especially in experimental and clinical psychology textbooks with single subjects. The logic here is based on the match between the empirical trend and a theoretically significant trend specified before the onset of the research or some rival trend (Ibid).

**Logic Model** is a match between theoretically predicted events and empirically observed events in sequential stages. This means that the events are staged in repeated cause-effect-cause-effect patterns (Ibid).

**Cross-Case Synthesis** is mostly applied for multiple case study analysis and is likely to be easier for multiple cases rather than a single case. Furthermore, it strengthens the findings if the cases are more than two. This technique treats the cases as separate throughout the study and finally aggregates the findings across the individual studies (Ibid). Consequently, it is advisable to make tables that will lead to cross-case conclusions according to some uniform framework and so enable a strong and deep analysis rather than simply analyzing single features. This technique permits the researcher to have an in-depth overview of the cases on a case-by-case basis in order to probe whether different cases tend to share similar results (Yin, 2012; Yin, 2003).

2.7.3. **Motivation for the Analytic Technique Used in this Research**

Cross-case synthesis and the pattern matching technique are applied in this research to analyze the empirical data. Within each dyad, the views of the buying firm and its supplier are combined to form the SD perspective of that dyad which is within-case analysis. A cross-case analysis is then performed by comparing the SD perspectives of the three dyads. Cross-case synthesis is suitable in this research because the research is dealing with three case dyads and this is supported by Yin (2012). Furthermore, the
logic of the cross-case technique aims at revealing whether the findings from these case
dyads support any broader pattern of conclusions (Ibid) in the context of SD and
whether the different cases dyads have some similarities in terms of practices, success
factors and barriers (Yin, 2009).

Moreover, the cross-case synthesis is strongly based on argumentative interpretations
and not on numeric tallies (Ibid). Thus, the researcher has the freedom of interpreting in
the analysis which is the main frame of the Hermeneutics tradition that is observed in
this research. Pattern matching is then applied by matching the dyadic views on SD with
the theoretical framework in this study.

2.8. Ethical Considerations

According to Bryman and Bell (2011), discuss ethical considerations in the business
research. They reveal four main principles based on Diener and Crandall’s (1978)
categorizations which researchers should take into consideration; harm to participant,
informed consent, invasion privacy and deception.

Researchers should assure the participants in terms of confidentiality of records and
anonymity of accounts if they are requested to do so. The participants or the
organization that are involved in the research should be honored to be not identified or
identifiable unless the permission is given to publish the information that allows them to
be identified. However, it is discussed that it is difficult to anonymize records and to
report the findings in qualitative research (Ibid).

The issue of informed consent mostly considers the observation and interview
atmosphere which the respondent should be informed in respect of recording equipment
and observation techniques. It should be told at the beginning of interview session and
get the permission to record. Furthermore, the prospective respondents should
acknowledge in terms of detailed information of the interview to make an informed
decision about their involvement (Ibid).

Invasion of privacy regards the issues that to what extent a researcher can be engaged in
the respondent and organization’s privacy. There is strong connection between the
concepts of privacy and informed consent. Since the more the respondent is informed
about the research topic and relevant details of its involvement, “he or she in a sense
acknowledges that the right to privacy has been surrendered for that limited domain”. Moreover, the privacy issue is linked to the notion of anonymity and confidentiality as well. There might be some specific topic or questions that the respondent might find sensitive and private which should be respected and confidential (Ibid, p. 136).

Finally, researcher must prevent deception in the research process. The main and true aim of research should be presented in order to avoid misleading prospective respondents’ perceptions. However, it is mentioned that it is hardly achievable the truth and naturalness of the answers that are conducted by the respondents when the researchers represents what the research is about (Ibid).

2.8.1. Motivation for using Ethical Principles in this Research

In this study, the researcher follows the abovementioned rules to keep the ethical principles especially during the data collection and interview processes. The first contact with the companies was applied to explain the context of the research and the researcher’s goals as transparent as possible in order to make the respective respondent acknowledge about the research topic as well as get their green light to be interviewed afterwards.

As mentioned previously, the data collection is conducted through semi-structured interview; therefore, to avoid missing any parts, the permission of recording is gained from each respondent before interview starts. Furthermore, the name of firm and/or respondent’s name are kept confidential upon request of the firm. Those types of information which make the organization identifiable is not mentioned in this research.

2.9. Research Quality

Bryman and Bell (2011) discuss about two main useful criteria – validity and reliability in order to evaluate the quality of business and management research. Further, they assert that the above mentioned criteria are mostly associated with quantitative research than qualitative research. However, there is a discussion between qualitative researchers on the logic the relevance between validity or credibility and qualitative research. In this regard, LeCompte and Goetz (1982), as cited in Bryman and Bell (2011) give expanded terms in respect of reliability and validity i.e. external reliability, internal reliability,
internal validity and external validity. Therefore, the terms reliability and validity might be employed in a similar way to quantitative research in order to assess a research.

Nevertheless, there is another stance concerning reliability and validity in which Lincoln and Guba (1985) and Guba and Lincoln (1994), as cited in Bryman and Bell (2011) argue that such criteria and terms should be specified in qualitative research. In other words, there should be an alternative to reliability and validity since they believe that there is not a “single absolute account of social reality feasible” (Bryman and Bell, 2011, p. 395). They propose two main criteria – trustworthiness and authenticity.

This research follows Guba and Lincoln’s approach to assess and describe the quality of the research. Reliability and validity are considered as mainly associated with quantitative research and thus, it is better to evaluate this research through labeling that are more appropriate for qualitative approach.

2.9.1. Trustworthiness

According to Bryman and Bell (2011), trustworthiness consists of four criteria: credibility as internal validity, transferability as external validity, dependability as reliability and confirmability as objectivity.

2.9.1.1. Credibility

According to Bryman and Bell (2011), there might be several accounts of an aspect of social reality. Thus, credibility will reveal that the researcher’s findings can be acceptable for others or not. In this respect, respondent validation and triangulation can be regarded as two techniques of credibility that can be applied along with good research process (Ibid). It means a researcher should arrive at the findings according to the principles of good practice.

*Triangulation technique* entails different sources of data, theoretical perspectives, multiple observers and methodologies but is not used in this research. *Respondent validation technique* refers to a process whereby a researcher provides an account of the research findings to the people on whom the research has been conducted (Bryman and Bell, 2011).
In order to follow good practice, credibility in this research starts with a comprehensive interview guide that covers all the research questions followed by the use of respondent validation. After each interview, the feedback, impression, findings, own ideas and experiments are shared with the personnel in order to see if the explanation of SD practice, success factors and barriers was understood and well written. Amendments are done if necessary. This is to ensure the validation of the interviews.

In this respect, there is another alternative technique—communicative validity for achieving truth that researcher may claim (Sandberg, 2005). This criterion emphasizes on intersubjectivity judgment through three ways: i) establishing initial introduction session in order to clarify the aim of research and further interview and presenting follow up question in interview process. ii) Analyzing empirical material through coherent interpretations i.e. compare the empirical parts with the particular interpretation in order to achieve more coherence and iii) share the findings with other researchers, colleagues and professionals in order to investigate the interpretation (Ibid).

From hermeneutics’ point of view, the dialogue is an essential part in order to assure a researcher’s interpretation. Thus, talking with people (interviewees) in respect of previous interviews, follow up questions and sharing the interpretation and impression in terms of studied material enhance the interpretation (Palmer, 1988).

The aforementioned techniques have the same aims and thus, they are in the same line. However, in communicative validity technique there is a deep investigation in respect of validity compared with respondent validation technique. Thus, there is no conflict to conduct both in order to achieve high validity of this research.

2.9.1.2. Transferability

Transferability refers to the possibility of using the research findings as a database to other “milieux” (Bryman and Bell, 2011, p.398). As the intention of this research is to investigate, identify and describe the practice, success factors and barriers between buying firms and their main suppliers (in dyadic relations), transferability of the research findings is possible and justified.

In this respect, it is essential to refer to one aspect of hermeneutics that Palmer (1988) regards as translation of the language. In this view, it does not only consider finding an appropriate synonym, but it is engaged in finding an appropriate passage i.e. an
intermediate to translate the meanings and knowledge into suitable ones that can fit in another situation or context.

2.9.1.3. Dependability

Dependability is another criterion of trustworthiness that refers to auditing all procedures and phases that the researcher takes during his/her or research that should be kept and accessible in a reasonable mode. It can consist of problem formulation, selection of research participants, fieldwork notes, interview transcript, data analysis decisions etc. However, it has been suggested that the researcher’s colleagues play a role of auditor to keep track of all phases (Bryman and Bell, 2011). Moreover, it is noteworthy that auditing is very demanding due to problems e.g. large datasets according to the nature of qualitative research. Accordingly, the examiner, tutor and opponent of this research are the auditors and thus, through their auditing, the dependability of this research is achieved (Sandberg, 1995).

2.9.1.4. Confirmability

Confirmability refers to objectivity of the research and “recognizing that complete objectivity is impossible in business research” (Bryman and Bell, 2011, p. 398). In this regard, the researcher should act in an honest way to assure others to judge the research and relevant outcomes without interfering with the researcher’s personal values. Further, Guba and Lincoln (n.d.), as cited in Bryman and Bell (2011), emphasize the auditor’s role in confirmability of the research. Since this research is personal work, confirmability is achieved through the examiner, tutor and opponent group during research procedure.

2.9.2. Authenticity

The second main criterion in evaluation of qualitative research that is suggested by Guba and Lincoln (n.d.) are authenticity which refers to a wider political impact on research. Fairness refers to presenting all viewpoints that exist in the social setting. Ontological authenticity refers to helping the members of the social setting to have a better understanding of their social situation. Educative authenticity considers if members realize the perspectives of others (Bryman and Bell, 2011).
To achieve the authenticity of this research, the interviews are carried out with the departments or personnel that are directly responsible for the SD program in the respective buying and supplying firms as given by the firms. This ensures that those with a better understanding of the SD framework give the explanations related to the practice of SD over time, its success factors as well as what they see as barriers to the SD program. Ontological and educative authenticity are achieved through the follow-up questions during the semi–structured interviews. This means that the follow-up questions help the interviewees to better explain and understand what is examined in SD as well as help them to realize the perspective of their partner in the buyer-supplier dyadic relation. If the possibility is given, then senior management is also interviewed to have a corporate view of the SD program.

2.10. Methodology Map of the Research

Figure below reveals the methodological choices for this research.
Figure 2.2: Methodology Map
Source: Own Creation
3. Theoretical Framework

This chapter is concerned with the theoretical framework related to the research questions. It narrates the story of the practices of SD efforts in academia and in enterprises as well as its categorization over time. Furthermore, the different influential factors that could lead a SD effort to be successful are explained. The last section in this chapter examines the possible barriers that a SD effort could face.

In the last three decades, there has been a growing interest by researchers on inter-firm relationships (Nagati and Rebolledo, 2013; Caniels et al., 2010; Janda et al., 2002) thus including buyer-supplier relations (Saccani and Perona, 2007). The efforts put in by many organizations to form supplier partnerships are rooted in SD (Lawrence, 2004). Previous studies have shown that buying firms use various SD practices in their relations with suppliers (Sánchez-Rodríguez, 2009; Wagner and Krause, 2009; Li et al., 2007; Sánchez-Rodríguez, 2005; Krause et al., 2000; Krause et al., 1998; Krause and Ellarm, 1997a). SD initiated by buying firms is often intended to improve the competence of the current supplier base when the suppliers fail to meet the short and long-term requirements of the buyer (Ghijsen et al., 2010). Competence is viewed as purposefully combining firm-specific assets (resources) in order to accomplish a given task by a firm and can be divided into market knowledge competence, production or operational competence and technological competence (Wu et al., 2011).

In modern business, managing a supplier base known as SD is important to a firm due to its strategic value (Arroyo-López et al., 2012; Hernández-Espallardo et al., 2010; Terpend et al., 2008). Developing deficient suppliers through SD can support the buying firm’s differentiation and/or cost leadership strategy, which contribute to its competitive advantage (Wagner, 2006a). Improving suppliers operations is the most obvious benefits of SD, which eventually improves the products and services given to the customer firm thus increasing the efficiency of the supply chain (Shokri et al., 2012). On the whole, achieving competitive advantage (i.e. differentiation and cost leadership) requires superior management of the buyer-supplier relationship that is realizable through SD (Wagner, 2006a).
De Toni and Nassimbeni, (2000) as well as Sánchez-Rodríguez et al. (2005) emphasize that SD practices have a positive contribution to strategic purchasing performance and to supply chain performance. The buying firm’s strategic orientation of its supply management activities towards accomplishing the firm’s main goals/objectives/strategies is known as strategic purchasing (Carr and Pearson, 1999 cited in Sánchez-Rodríguez, 2009).

SD is challenging to both buyer and supplier firms (Shokri et al., 2012; Handfield et al., 2000) because apart from the human and capital investments, they have to share sensitive information and find effective methods of measuring performance. Thus, the executive of the buyer should be convinced that their investment in the supplier is a necessary risk while that of the supplier should see the need to accept assistance from the customer (Chidambaranathan et al., 2009; Handfield et al., 2000). Wagner and Krause, (2009) state that firms are aware of the two dimensions of goals in the definition of SD which are supplier product and delivery improvement as well as supplier capability improvement.

Giving that SD is challenging to the partners involved and that investing in a supplier carries some risks, it is worthwhile to have clear objectives on how to evolve in such a program, understand the critical factors that might enable it to succeed as well as strive to avoid those which may create difficulties in order to reduce the risk and ensure its success. This study examines the practices conducted in an SD program and critical factors i.e. its success factors and barriers based on the general model illustrated below.
Figure 3.1: Success Factors, Barriers and Practices of a Buyer-supplier Dyad in a SD Program
Source: Own creation
3.1. The Story of the Practices of Supplier Development

Typically, when a buying firm is not satisfied with its suppliers’ performance or is faced with deficient suppliers in terms of their capabilities (Wagner, 2010) regarding technical, manufacturing, quality, delivery, financial, or managerial as well as supplier’s sources such as product, process, or operating systems (Hahn et al., 1990), the firm’s decision can be one of these options:

i) invest assets, resources and time in the present supplier’s organization to improve its performance and/or capabilities; ii) manufacture the item/component by itself instead of buying; iii) make use of other suppliers or a combination of any of above-mentioned alternatives (Krause et al., 2000; Handfield et al., 2000; Krause et al., 1998).

The first option is becoming increasingly important since buyers tend to improve supplier’s performance and capabilities while at the same time, reducing the costs of supplied materials and parts (Krause et al., 1998). The other alternatives might not be feasible due to manufacturing costs and investment, alternative suppliers’ unavailability and high switching costs (Gunther and Wagner, 2012). Further, conflicts might be taken place associated with the buying firm’s intentions and core competencies by choosing last two options (Wagner, 2006b). Consequently, SD efforts can be regarded as the building block of managing key suppliers in order to provide selected suppliers with opportunities to strengthen their capabilities (Nagati and Rebolledo, 2013).

The basic philosophy of SD can be traced back to ancient time’s consumer and military buying aspects (Leenders, 1966 cited in Wagner, 2006b). The practice of SD was seen in the US automobile industry through Ford’s efforts to improve its suppliers’ capacity and performance in the early 1900s (Seltzer, 1928 cited in Krause et al., 2007). Hence, firms in the automotive industry were the pioneers in SD practices (Praxmarer Carus et al., 2013; Shokri et al., 2012; Wagner, 2006b).

During this period, theorists in organizational behavior stated that industries that deal in complex products tend to be interdependent between the component makers and the focal firms as in the automobiles, aircraft, electronics, heavy machinery and machine tools etc. industries. In the last decade they acknowledge that investment in relation-specific assets and knowledge sharing is needed to coordinate non-routine reciprocally interdependent activities (Krause et al., 2007).
SD was also used during and after World War II. Toyota initiated the use of SD in the automobile industry through a supplier improvement association to improve productivity of subcontractors (Ibid). SD groups formed in the 1990s by other companies include Best Practice, Best Process and Best Performance (BP) at Honda, Purchased Input Concept Optimization with Suppliers (PICOS) at GM/Opel, Drive For Leadership (DFL) at Ford, Process Optimization of Supplier Parts (POZ) at BMW and Continuing Improvement Process (KVP2) at Volkswagen (Praxmarer-Carus et al., 2013, p. 2).

Other examples of firms that have implemented SD practices are Quick response manufacturing at John Deere (Golden, 1999), Toyota and Honda (Shokri et al., 2012), Harley-Davidson and Motorola (Wagner, 2006b). The efforts deployed by producers to have many viable suppliers and to improve suppliers’ performance were called SD by Leenders (1966). Ghijsen et al. (2010, pp. 18-19) state that the description of the SD process from 1991 onwards has been similar in researches and give the following as practices of the SD terminology in respective researches that could be regarded as its evolution: promises of increased and future businesses (Giunipero, 1990), supplier evaluation (Krause and Ellram, 1997a), buying from alternative suppliers (Krause and Ellram, 1997), supplier certification (Krause, 1999), supplier reward and recognition as well as training and education of suppliers (Krause et al., 2000), technical assistance (Forker and Hershauer, 2000), site visits to suppliers and inviting suppliers to the buyer’s site (Humphreys et al., 2004), providing equipment, tools and capital (Humphreys et al., 2004; Wagner, 2006), collaboration with suppliers in improving their parts and materials as well as supplier involvement in the buyer’s new product design (NPD) and development (Sánchez-Rodríguez et al., 2005).

3.1.1. The Story of the Origins of Supplier Development Practices

Bai and Sarkis (2011) demonstrate that most of the primary SD programs emphasized on reaction to crises from basic performance requirements. In the early 1980s, the necessity of supplier improvement had not been seen but enterprises have now realized that it is fundamental to manage their suppliers when they expect fewer defects (New
and Burnes, 1998). Therefore, organizations have started to develop their suppliers’ practices to create value associated with required products (Bai and Sarkis, 2011).

Hahn et al. (1990) outline that the traditional purchasing functions have emphasized on the development of a network of competent suppliers to achieve acceptable quality at a reasonable cost, and in a timely manner. However, if such a competent supplier network has not been formed, the firm’s competitive edge would have been hindered. Hence, an uninterrupted flow of required materials in terms of quality, cost and delivery time is the basic objective of the procurement functions. In this regard, traditional SD decisions were involved in the purchasing function with little customer inputs as long as the products met customer specifications (Hartley and Choi, 1996) since the purchasing personnel were supposed to be the best for decision making (Hahn et al., 1990).

Procurement’s emphasis has shifted towards long-term optimization of supplier portfolios (Wagner, 2000) to build a bound buyer-supplier relationship through SD efforts. This enables the achievement of long-term mutual benefits (Yeh, 2008) in respect of tangible or intangible (Hartley and Choi, 1996), direct or indirect (Wagner, 2010), short- or long-term (Krause and Ellram, 1997b) benefits and outcomes such as improvements in the suppliers’ operational and financial performance in the short-term as well as indirect benefits in the long-term due to continuous development of the suppliers’ fixed assets and intangible assets (Arroyo- López et al., 2012).

3.1.2. The Story of Supplier Development Practices in Research

According to the analysis of the academic literature, the term “Supplier Development” can be seen in the work of Leenders (1966) who sees it as a tool for manufacturers to increase the number of qualified suppliers and as the effort to improve supplier performance (Mortensen and Arlbjørn, 2012; Krause et al., 2007; Wagner, 2006b). Later, activities were reported in Canadian industrial firms (Wagner, 2006b). As Krause et al., (1998) and Wagner (2006b) mention, SD efforts were concerned with quality management issues and thus, the “first wave” of SD research (1989-1991) started with in the quality management field (Wagner, 2006b).

In this respect, Terpend et al. (2008) reviewed the studies of mutual buyer–supplier relationships published in four prominent U.S.-based academic journals between 1986 and 2005. They conclude that researchers between 1986 and 1991 focused primarily on
operational performance as well as supplier evaluation, supplier selection, supply base reduction and SD. Limited research in SD suggests an initial interest in these topics. Between 1992 and 1995, scholars emphasized communication, improvement of information sharing, supplier evaluation, supplier selection and SD. SD practices were reported and found to be more prevalent than generally believed or reported. The main goal of SD reported by buyers was product improvement.

The “second wave” can be regarded as the period when researchers focused on relationship management issues (since 1995). The researches emphasized on SD practices exclusively associated with large scale empirical studies (Carr & Kaynak, 2007) specifically in United States of America than in Europe (Wagner, 2006b). According to Terpend et al. (2008), it can be noted that between 1996 and 2000, communication and information sharing continued to attract the attention of researchers but studies that included trust greatly increased. During this time period, three studies focused on SD. The researches on SD investigated the factors that promote SD activities (Krause, 1999), the performance outcomes of SD (Krause, 1997) and identified two types of SD approaches: the strategic and the reactive approach (Krause et al., 1998).

Between 2001 and 2005, communication, information sharing and trust practices remained the most dominant issues and studies on supplier evaluation, contractual clauses, supplier selection, supply chain reduction and SD were still few in mutual buyer and supplier relationships.

Thus, many more manufacturing firms now realize the vital role of the performance of their suppliers associated with their competitive advantage. Consequently, more focus is put on SD programs by scholars in order to study how SD initiatives impact on buyer and supplier performance (Li et al., 2007).

3.1.3. Categorization of Supplier Development

Sánchez-Rodríguez et al. (2005) categorize the SD practices into three sets of practices according to the level of firm involvement and implementation complexity:

i. Basic SD which considers those practices that demand limited buying firm involvement and minimum investment of the company’s resources i.e. personnel, time, and capital. Buying firms usually implement such practices first in order to
improve supplier performance and/or capabilities such as measures of evaluating supplier performance and providing feedback to suppliers, sourcing from a limited number of suppliers per purchased item, parts standardization, and supplier qualification.

ii. *Moderate SD* which refers to practices that are characterized by moderate levels of buyer involvement. These types of practices are more demanding in terms of buying firm’s resources compare to the previous one. Thus, moderate SD practices include measures of visiting suppliers to assess their facilities, rewarding and recognizing supplier’s performance improvements, collaborating with suppliers in materials improvement and certification of suppliers through ISO 9000.

iii. *Advanced SD* is concerned with the practices that require maximum levels of buying firm involvement with suppliers and thus needs a greater use of the buying firm’s resources. It requires a more cooperative atmosphere than the previous two types and contains measures of training provided to suppliers, supplier’s involvement in the buyer’s NPD process, sharing of accounting information with the supplier, and sharing of cost and quality information with the supplier.

Another categorization is *direct* (internalized) and *indirect* (externalized) SD (Wagner, 2010; Wagner 2006b; Krause et al., 2000; Monczka et al., 1993). The investment of no or limited resources in a particular supplying firm for improvement is regarded as indirect SD (Wagner, 2010) such as competitive pressure, supplier assessment and supplier incentives (Krause et al., 2000). Indirect SD concerns to the communication of the buying firm by setting of targets (goals), measurement of goal attainment and feedback of goal attainment to the suppliers (Wagner, 2010). It concerns the activities such as information exchange, request, supplier incentives (recommendation and promise), competitive pressure (threat), legalistic pleas and supplier evaluation (Wagner, 2010 and Krause et al. 2000).

Direct SD is the investment of human and capital resources of the buying firm by playing an active role in a supplier firm (Ibid) such as providing capital, machines and equipment, technology, or temporarily assignment of support personnel to a supplier's facility and education of the suppliers’ staff (Krause et al., 2000; Monczka et al., 1993). Direct SD refers to qualification and knowledge transfer to the supplier’s organization through activities such as on-site consultation, inviting supplier’s personnel to the
buying firm in order to improve the supplier’s capabilities as well as to develop, produce, and deliver products more efficiently (Wagner, 2010).

It is suggested that the buying firms should first engage in indirect SD activities such as evaluation and certification before starting direct SD activities such as knowledge transfer with the supplier. When the goals are clearly specified by buying firm, it is sure to avoid misunderstanding by the supplier and this enhances the better results (Ibid).

The SD literature also refers to another categorization that has been done by Hahn et al., (1990) which is similar to direct or indirect SD approaches i.e. the broad and narrow perspectives. The latter perspective refers to passive and periodic involvement and is involved in generating new sources of supply as well as supplier evaluation and selection while the broad perspective is much more complex and proactive i.e. the SD’s focus is on long-term mutual benefits by upgrading existing suppliers’ capabilities.

One more categorization approach is based on buying firms attitude in SD efforts. Krause and Ellram (1997a) assert that buying firms might follow a proactive philosophy in terms of the level of involvement in suppliers’ problems, improvement of suppliers and the importance of suppliers’ performance to the buying firm’s success with a long-term view of the relationship. In this regard, proactive firms expect higher levels of quality i.e. raising performance expectation (Krause, 1997) from their suppliers rather than accepting what they receive and tend to work jointly with suppliers to achieve the specified levels.

Through further research in qualitative analysis, Krause et al. (1998) distinguish SD processes that are implemented by buying firms into two distinct approaches; reactive (remedial) and strategic (systematic) efforts. The former approach refers to those activities and efforts that increase the selected suppliers’ performance in an ad hoc manner to eliminate a specific supplier’s deficiencies only after a problem actually occurs i.e. poor performance of selected supplier is realized as a threat for the buying firms’ ability to deliver satisfactory value to its own customer. Thus, the reactive firms are less systematic in supplier performance evaluations.

The latter approach is similar to the proactive philosophy of Krause and Ellram (1997a). It concerns the efforts that increase the entire supply base’s capabilities for long-term competitive advantage through identifying critical commodities, those supplier who
need development (Krause et al., 1998) and allocating organizational resources and using a combination of SD activities (Wouters et al., 2007) by buying firms. This means that SD efforts are highly demanding in terms of joint improvements by both parties and there must be bilateral deployment of resources (Krause et al., 1998).

### 3.1.4. Summary of the Practices of Supplier Development

The academic literature has categorized SD practices in a number of SD constructs (Sánchez-Rodríguez et al., 2005) which have been explained above briefly. In summary, according to the aforementioned categorizations and types, SD practices are sorted in ascending order of the buyer’s involvement intensity as shown in the table below.

<table>
<thead>
<tr>
<th>SD Practices</th>
<th>Selected Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buying from alternative suppliers to provide competition for current suppliers (Competitive pressure)</td>
<td>Hahn et al. (1990); Krause (1997); Forker et al. (1999); Krause et al. (2000)</td>
</tr>
<tr>
<td>Formal/informal evaluation of supplier performance (Supplier evaluation)</td>
<td>Hahn et al. (1990); Krause (1997); Krause and Ellram (1997b); Krause et al. (1998); Krause et al. (2000); Sánchez-Rodríguez et al. (2005); Modi and Mabert (2007); Wagner and Krause (2009); Wagner (2010); Li et al. (2012)</td>
</tr>
<tr>
<td>Buying from a limited number of suppliers per purchased item</td>
<td>Krause (1997); Krause (1999); Krause et al. (2000); Sánchez-Rodríguez et al. (2005)</td>
</tr>
<tr>
<td>Raising performance expectations</td>
<td>Monczka et al. (1993); Krause (1997)</td>
</tr>
<tr>
<td>Communication and feedback</td>
<td>Lascelles and Dale (1990); Krause (1997); Krause and Ellram (1997a); Krause et al. (1998); Forker et al. (1999); Lawrence, (2004); Sánchez-Rodríguez et al. (2005); Narasimhan et al. (2008); Wagner and Krause (2009); Bai and Sarkis (2011)</td>
</tr>
<tr>
<td>Knowledge transfer</td>
<td>Krause (1999); Dyer and Hatch (2006); Modi and Mabert (2007); Wagner and Krause (2009); Wagner (2010); Bai and Sarkis (2011)</td>
</tr>
<tr>
<td>Recognition</td>
<td>Galt and Dale (1991); Krause (1997); Krause and Ellram (1997a); Krause (1999); Krause et al. (2000); Sánchez-Rodríguez et al. (2005)</td>
</tr>
<tr>
<td>Promises of increased current and/or future business if supplier performance improves (Supplier incentives)</td>
<td>Monczka et al. (1993); Krause (1997); Krause et al. (2000)</td>
</tr>
<tr>
<td>Site visit</td>
<td>Hartley and Choi (1996); Krause (1997); Krause and Ellram (1997a); Krause et al. (2000); Humphreys et al., 2004, Sánchez-Rodríguez et al. (2005); Modi and Mabert (2007); Nagati and Rebollo (2013)</td>
</tr>
<tr>
<td>Long-term contract</td>
<td>Galt and Dale (1991); Hartley and Choi (1996); Forker et al. (1999);</td>
</tr>
<tr>
<td>Technical assistance in improving suppliers’ parts and materials</td>
<td>Forker et al. (1999); Sánchez-Rodríguez et al. (2005)</td>
</tr>
<tr>
<td>Expectation of supplier certification</td>
<td>Galt and Dale (1991); Krause (1997); Krause (1999); Sánchez-Rodríguez et al. (2005); Wagner (2010)</td>
</tr>
<tr>
<td>Intensive information sharing</td>
<td>Sánchez-Rodríguez et al. (2005); Krause (1999); Dyer and Hatch (2006); Modi and Mabert (2007); Wagner and Krause (2009)</td>
</tr>
<tr>
<td>Training and education of a supplier’s personnel</td>
<td>Galt and Dale (1991); Monczka et al. et al. (1993); Krause (1997); Krause and Ellram (1997a); Krause et al. (1998); Forker et al. (1999); Krause et al. (2000); Sánchez-Rodríguez et al. (2005); Modi and Mabert (2007)</td>
</tr>
<tr>
<td>Exchange of personnel between the two firms</td>
<td>Krause (1997); Li et al. (2007); Modi and Mabert (2007)</td>
</tr>
</tbody>
</table>
Based on the research literature stated in Table 3.1 above, the SD practices identified in this research are operationalized in the table below. This operationalization gives the possible indicators for each SD practice.

<table>
<thead>
<tr>
<th>SD Practices</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buying from alternative suppliers to provide competition for current suppliers (Competitive pressure)</td>
<td>Bidding, Short-term Contract</td>
</tr>
<tr>
<td>Formal/informal evaluation of supplier performance (Supplier evaluation)</td>
<td>Quality standards, Delivery time, Number of received defected products, Precision of delivered quantity, Random testing of delivered products</td>
</tr>
<tr>
<td>Buying from a limited number of suppliers per purchased item</td>
<td>How many other supplies supply the same product?</td>
</tr>
<tr>
<td>Raising performance expectations</td>
<td>No defect delivery, Short lead times, Frequent deliveries, Cost reduction</td>
</tr>
<tr>
<td>Communication and feedback</td>
<td>Communication methods, Frequency of communication, Feedback meetings return inwards, Sending feedback of evaluation</td>
</tr>
<tr>
<td>Knowledge transfer</td>
<td>Learning seminars, Working together, On-site consultation, Inviting Supplier’s personnel</td>
</tr>
<tr>
<td>Recognition</td>
<td>Company news letter, Business dinners, Supplier council meeting, Banquets</td>
</tr>
<tr>
<td>Promises of increased current and/or future business if supplier performance improves (Supplier incentives)</td>
<td>Priority for future business, Higher order volumes, promise for extended contract, recommendations</td>
</tr>
<tr>
<td>Site visit</td>
<td>Inspection</td>
</tr>
<tr>
<td>Long-term contract</td>
<td>5 years, 10 years or open contracts etc…</td>
</tr>
<tr>
<td>Technical assistance in improving suppliers’ parts and materials</td>
<td>Visiting engineers</td>
</tr>
<tr>
<td>Expectation of supplier certification</td>
<td>Certification by buyer, Certifying organization,</td>
</tr>
<tr>
<td>Intensive information sharing</td>
<td>POS, EDI, Accounting and financial data, Cost quality levels information, Technical and production process information exchange</td>
</tr>
<tr>
<td>Training and education of a supplier’s personnel</td>
<td>Organized training sessions, Temporary personnel transfer</td>
</tr>
<tr>
<td>Exchange of personnel between the two firms</td>
<td>On-site verifier or collocation of staff</td>
</tr>
<tr>
<td>Supplier involvement in the buyer’s NPD and development</td>
<td>Product design evaluation meetings</td>
</tr>
<tr>
<td>Direct investment in a supplier by the buying firm</td>
<td>Purchase of required machines, tools and casting, Improving machines, Specialized training of suppliers personnel</td>
</tr>
</tbody>
</table>

Table 3.2: Operationalization of SD Practices
Source: Own Creation
The table above is represented below by the stepwise model with low buyer involvement in an SD program at the bottom and the highest buyer involvement at the top. The buyer’s involvement activities are grouped into low, moderate and high involvements.

**Figure 3.2:** Stepwise Model of SD Practices  
**Source:** Own Creation
3.2. Success Factors of a Supplier Development Program

SD practices are the elements for building a strong supply management thus form the main success factors of effective SD programs in many researches. Buying firms make use of SD as a reaction to poor performing suppliers but it becomes important to the strategy of the buying firm as the performance and capabilities of the suppliers increase (see Figure 3.2 above). After correcting the suppliers’ performance difficulties, buying firms can use the supply base in their strategy by investing in SD depending on the potential for competitive advantage (Krause et al., 1998).

3.2.1. Supplier-Specific Success Factors

These success factors are initiated by a supplier and require its deep involvement that leads to a successful SD, which is beneficial to the supplier.

3.2.1.1. Supplier’s Expectations in its Strategic Objectives

SD is a mutual program that necessitates a joint recognition by the buying firm and supplier firm. When a supplier by itself hunts for further improvements of its performance and capabilities and hopes to grow by dealing with a buying firm, a close philosophical and strategic match could exist between the buying firm and the supplier firm’s managements thereby improving the chances of success in the alliance (Humphreys et al., 2004; Li et al., 2012). The supplier’s expectation of future growth and shared cooperation is considered by the buying firm when selecting a supplier to develop (Monczka et al., 1993).

3.2.1.2. Conformity of Supplier’s Capabilities

On the one hand, a supplier could effectively meet up with the requirements of its customers (buyers) by focusing on each customer firm in its strategy and ensuring that its capabilities conform to the buying priorities of the customer. On the other hand, the supply management activities of a buyer should be directed towards its overall goals in its strategy. Thus, it is logical to say that the buyer’s efforts to realign the supplier’s capabilities with the buyer’s needs should be included in the strategic purchasing plan of the buyer so that they can contribute towards achieving the overall goals of the buyer. In
this respect, strategic purchasing should precede the application of supply management practices/activities including supplier development (Sánchez- Rodríguez, 2009).

3.2.1.3. Supplier Commitment

Ghijsen et al. (2010, p. 20) defines commitment as “supplier’s desire to maintain and to strengthen the valued relationship and represents a long-term orientation to the relationship”.

In effect, it would appear that buyers assist those suppliers who show a willingness or commitment in the long-term to develop their manufacturing and technical capabilities. It is only when such a commitment is apparent that buying firms provide their own resources in developing suppliers (Humphreys et al., 2011). Long-term commitment induces the supplier to be more innovative with respect to improving performance (Prahinski and Benton, 2004; De Toni and Nassimbeni, 2000). The supplier’s commitment in terms of loyalty, cooperation and longevity in the relationship with the buying firm contributes to successful SD efforts associated with operational performance measures (Prahinski and Benton, 2004).

3.2.2. Buyer-Specific Success Factors

These success factors are initiated and executed by a buyer or require a buyer’s effort for their realization with the cooperation of the supplier.

3.2.2.1. Long-term Strategic Goals

The clarity of long-term strategic goals determines the effectiveness of SD (Humphreys et al., 2004). According to Watts and Hahn, (1993) as cited in Humphreys et al., (2011), buyers SD efforts should concentrate on developing suppliers’ future capabilities in technology and product development rather than on current quality and cost. They emphasized that developing supplier capability and flexibility would be the key to the success of SD (Li et al., 2012; Humphreys et al., 2011; Humphreys et al., 2004).

In the short-term, buying firms usually measure the success of SD programs based on the outcomes which are generally their requirements such as cost reduction, short delivery time, quality materials and components but viewing SD as a process may make
it more effective in building capabilities which enhance permanent improvements. This is because the buyer-supplier dyad gets benefits from partnership relations involving mutual learning and complementary capabilities than from corrections given by the buyer. With the long-term view, operational knowledge transfer is facilitated by the interaction between firms to integrate the specialized knowledge of the employees in problem solving (Arroyo-López et al., 2012).

3.2.2.2. Top Management Support

According to Krause (1999), without the awareness of top management of the competitive benefits that can be derived from effective supplier management, it is unlikely that the buying firm will devote sufficient resources and have the willingness to manage supplier performance. Consequently, top management has been found to be an important enabler in initiating a SD program based upon the buying firm’s competitive strategy (Humphreys et al., 2004). The purchasing department requires the encouragement and support from top management to use the buying firm’s resources within a supplier’s operation (Li et al., 2012; Humphreys et al., 2004).

The need for the implementation of a SD program may be derived from top-level managers, because they are most aware of the firm's strategic imperatives to remain competitive in the marketplace (Hahn et al, 1990). Thus, top management may initiate the SD program (Krause and Ellram, 1997b).

3.2.2.3. Power Influence Strategy in Supplier Development

Ghijsen et al. (2010, p. 18) explain power influence strategy as “the structure and content of the communication with which a firm (source) tries to control or change the behavior of another firm (target)”. In this study, the buying firm (source) tries to change the performance of the supplier (target). Influence strategies can be divided into indirect strategies (information exchange and recommendation) and direct strategies (request, promises, threats and legalistic pleas). Wagner (2010) also applies the same influence strategies as used in marketing channels into SD in industrial buyer-supplier relationships.
For information exchange, the source gives information to the target with no specific action required from the target. For recommendation, the source specifies the action expected from the target in order for the latter to achieve the desired positive results. As concerns request, the source demands action from the target without indicating any subsequent positive or negative sanctions. When using promise, the source proposes a specific compensation to the target in the situation where the target fulfills the requirements and desires of the source. For threat, the target is informed by the source that failure to comply will lead to negative sanctions. In the case of legalistic plea, the source contends that a formal agreement or contract requires and necessitates the target to comply (Ghijsen et al., 2010; Wagner, 2010).

It is obvious that indirect strategies try to change the view of the target as to the desirability of an action such that a change in behavior can bring desired results such as improved performance or avoid adverse ones. On the contrary, direct strategies try to change behavior by giving little consideration to the view of the target through the use of explicit or implicit rewards or sanctions (Ghijsen et al., 2010).

Influence strategies indicate that the buying firm is not actively involved but uses power or its position to execute the SD program rather than collaborative joint actions with the suppliers. Consequently, influence factors help the buying firms in upgrading the suppliers’ products, delivery performance and capabilities in SD programs (Wagner, 2010).

3.2.2.4. Buyer Commitment

Krause et al., (2007) state that commitment causes performance goals establishment, competitive advantage (Prahinski and Benton, 2004) as well as value creation for the buying firm. The buying firm, should exhibit its commitment to supplier through active engagement, investment and relationship development (Wu et al., 2011). Some buyers say that long-term contracts ranging from three to five years show commitment, which means a long-term perspective but this commitment always has elements of genuine risks if it has to be sustainable (Krause and Ellram 1997b).

When a buying firm involves its supplier in product development, the commitment in the buyer-supplier relationship increases because the supplier deems the relationship as important, wants it to continue and hopes for future benefits. This attached importance
motivates the supplier to apply maximum effort in the SD program to meet and even exceed the buyers’ requirements thereby making commitment to be beneficial to the relationship (Ghijsen et al., 2010).

3.2.3. Buyer-Supplier Interface Success Factors

These factors or activities require the attention and deep involvement of both the buyer and the supplier firms for their effectiveness.

3.2.3.1. Knowledge Sharing and Transfer

From the knowledge based view of a firm, knowledge is regarded as a major and strategic resource that is the base of competitive advantage (Wagner, 2010). Thus, SD programs have been conceived as processes intended to transfer and inculcate knowledge and capabilities from the customer to the supplier (Wagner, 2006) through activities of knowledge transfer that range from electronic transmission of codified (explicit) knowledge to the transfer of the tacit (un-coded or ambiguous) knowledge using collocation of employees (Arroyo-López et al., 2012; Wagner, 2010; Modi and Mabert, 2007). Knowledge transferred to supplier firms such as manufacturing or technological knowledge (Wagner and Krause, 2009) enables them to develop, produce and distribute superior products efficiently as it improves suppliers’ production or upgrade its technology, logistics and other capabilities in the long-term (Wagner, 2010).

Capabilities are a firm’s ability to assemble, integrate and deploy resources to realize benefits (Barney et al., 2001 cited in Arroyo-López et al., 2012). In SD, these capabilities go from basic skills for performance to continuous improvement and innovation abilities and are transferred through multiple activities and routines that facilitate the interaction, information interchange and integration. This intensifies the quality of knowledge being transferred (Arroyo-López et al., 2012). Consequently, SD is a kind of cooperation (Li et al., 2012) between a buyer and a supplier.

Knowledge transfer activities include multidisciplinary and inter-firm, training of the supplier’s personnel, temporary personnel transfer, inviting supplier’s personnel and “on-site” technical assistance and consultation (Arroyo-López et al., 2012; Wagner, 2010). These activities improve the economic performance of the supplier (Hernández-
Espallardo et al., 2010) as well as the suppliers’ capabilities to manufacture, manage, design, use new technology and create intellectual capital which lead to competitive advantage of the buyer-supplier dyad (Arroyo-López et al., 2012).

Buyer-supplier collaboration enhances the efficiency of the flow of knowledge to increase the effectiveness of SD activities and the firms’ ability to innovate (Arroyo-López et al., 2012). The lack of know-how and resources to improve performance pushes suppliers to welcome support and collaboration from the buying firms, especially small supplier companies. Thus, resource investment activities bring learning benefits to supplier and help them to understand the desires and requirements of the buyers in order to produce quality goods above competitors (Ghijsen et al., 2010).

Since knowledge may be an important source of coordination, sharing it in a SC is necessary especially in the case where sharing of knowledge with suppliers is part of SD programs. This is compatible with previous academic studies which demonstrate that SD activities cause exchange of knowledge between firms (Nagati and Rebolledo, 2013; Modi & Mabert, 2007; Krause, 1999). Knowledge transfer is intended to increase suppliers’ competence as well as a network of competent suppliers in a straightforward way to improve purchasing performance (Hernández-Espallardo, 2010; Sánchez-Rodríguez et al., 2005).

In collaborative product development, Littler et al., (1995) as cited in Hernández-Espallardo, (2010) found that only 33 per cent of respondents were concerned about giving proprietary information, which may comprise all or part of the firm’s unique contribution to its competitive position as the major risk in this type of collaboration. They also found that only another 11 per cent of respondents mentioned the risk that of collaborators becoming competitors. These figures show that a high percentage of companies accept that collaborative product development is a good factor for a successful buyer-supplier relationship.

This reveals the existence of a paradox in inter-firm learning which can lead to success but may also act as a hindrance to SD. Mohr and Sengupta, (2002) as cited in Hernández-Espallardo, (2010, p. 103) support this view by stating that “while one wants to learn as much as possible from one’s partners in order to maximize the effectiveness and efficiency of the partnership, one also must limit transparency and leakage of
information in the partnership so as not to dilute the firm’s sources of competitive advantage”.

3.2.3.2. Trust

Trust is considered as a central organizing construct in buyer–supplier relationships (Shokri et al., 2012; Wagner, 2011). It builds up slowly from experience as the relationship progresses and dies out as the firms seek to leave the relationship. Firms in buyer-supplier relationships are more willing to work with those firms that they can trust (Wagner, 2011). Bagchi and Skjoett-Larsen (2003) also emphasize on trust between the partners in a buyer-supplier relationship in order to promote collaboration, decision delegation and reduce irrational behavior.

Trust is considered and identified as a building block in buyer-supplier relationships literature. However, it is also mentioned that the operationalization of this concept is not simple (Goffin et al., 2006; Smeltzer, 1997; Kumar et al., 1995). In this regard, trust is explained by Arrow, (1974) as cited in Smeltzer, (1997, p. 41) as follow:

“Trust and similar values, loyalty, or truth telling are examples of what an economist would call ‘externalities.’ They are goods; they are commodities; they have real practical value; they increase the efficiency of the system, enable you to produce more goods or more of whatever values you hold in high esteem. But they are not commodities for which trade on the open market is technically possible or even meaningful”.

When trust grows and prevails, the buyer-supplier relationship is likely to move towards a partnership orientation (Lawrence, 2004) and employees involved in SD activities will be more open without hesitation, even to knowledge sharing with the employees of the other party (Wu et al., 2011; Ryu et al. 2009; Wagner, 2011; Hernández-Espallardo et al., 2010). Tomkins (2001) emphasizes this partial trade-off between trust and knowledge sharing i.e. as trust increases between the firms, more knowledge can be shared freely.

Terpend et al. (2008) consider that the extent of information sharing depends on the degree of mutual trust that has been shaped between the buyer and the supplier. Interestingly, Zhang et al. (2011) argue that communication directly increases a
supplier’s trust in the buying firm. Furthermore, a climate of trust can cause a firm to be more committed to what they agree to do since trust raises the level and intensity of committed behavior in a buyer-supplier relationship (Nagati and Rebolledo, 2013; Ryu et al., 2009).

It has also been argued that trust is a more effective and less costly means of safeguarding specialized investments. It is suggested that buying firm’s trust in the supplier would enhance the effect of buyer asset specificity on joint action in buyer–supplier relations (Li et al., 2012; Humphreys et al., 2004). Trust could also create an environment that prohibits opportunistic behavior between the parties to an exchange as well as induces desirable behavior and thus lower the transaction costs required to achieve investments in specialization (Humphreys et al., 2011; Ryu et al., 2009).

Trust plays an important role in successful business-to-business relationships because it reduces the costs of conflict and other transaction costs and it is more efficient than other governance mechanisms in allowing the relationship to find and develop their potential synergies. Therefore, the outcome of SD activities in trust-based and reliable relationships will be more positive (Hernández-Espallardo, 2010; Wagner, 2011). In short, trust is vital in creating enthusiasm for both parties to participate in SD activities (Nagati and Rebolledo, 2013).

3.2.3.3. Communication Methods and Effective Communication

An important factor in an effective SD program is the communication method or medium for communicating information and knowledge between the buyer and the supplier (Shokri et al., 2012). Communication methods are classified into traditional communication methods (telephone, fax, e-mail, written and face-to-face discussions) and advanced communication methods (computer to computer, EDI and enterprise resource planning - ERP) but are used in a combined manner (Carr and Kaynak, 2007).

These methods are used for information sharing between the buying firm and supplier. By information sharing is meant the communication of information that is detailed frequent and timely between buyer and major suppliers to meet the buyers’ requirement. There is an indirect but positive relation between communication and firm performance. Communication methods have a straightforward or direct effect on information sharing i.e. they are technologies that enable and enhance the sharing of information.
Information sharing within a firm clarifies employees on important issues with suppliers (Carr and Kanyak, 2007). These considerations make communication methods and information sharing to be important for a successful SD.

Effective, two-way communication is characterized as an essential successful factor to buyer and supplier performance (Wagner, 2010; Prahinski and Benton, 2004; Vijver et al., 2001) and specifically in SD efforts (Krause and Ellram, 1997b). According to Li et al., (2012), open and frequent communication between the buying firm’s personnel and its suppliers is an excellent approach in motivating suppliers. This leads towards achieving a sustainable buyer-supplier relationship (Krause et al., 1998).

Involvement in an early phase and open channels of communication increase understanding between the buying firm and the supplier firm as well as enable conflict resolution between both parties (Humphreys et al., 2004). The success of good communication lies in the frequency, information sharing, personal involvement of the buying firm and its related personnel, develop a relationship-specific memory and the genuineness of the efforts (Li et al., 2012; Hernández-Espallardo et al., 2010; Humphreys et al., 2004).

Krause and Ellram, (1997b) argue that when communication occurs among design, engineering, quality control and other functions between buying firms and supplier firms, in addition to the purchasing-sales interface [parallel communication (Forslund and Jonsson, 2009)], the suppliers’ quality performance becomes greater than what it was when only the buying firm’s purchasing department and suppliers’ sales department [serial communication (Forslund and Jonsson, 2009)] act as the inter-firm information channel. Gait and Dale (1991) as cited in Krause and Ellram (1997b) emphasize the importance of two-way communication between buyer and suppliers and its potential positive effect on the buying firm’s competitiveness. Humphreys et al. (2011) note that effective communication enhances synergistic benefits which in turn result in a greater commitment and proactivity from suppliers.

Communication involves different aspect such as communication quality, participation, and information sharing. The quality of communication is measured by its timeliness, accuracy, adequacy, completeness, and credibility (Vijver et al., 2001).
3.2.3.4. Long-term Commitment

The majority of buying firms involved in SD perceive their suppliers as partners (Krause and Ellram, 1997b). In agreeing to adopt a partnership strategy, this means that a buying firm is ready to pursue a long-term relationship with the suppliers and this necessitates of commitment (Humphreys et al., 2004). Morgan and Hunt, (1994) as cited in Ryu et al. (2009, p. 499) define commitment as “the belief of an exchange partner in an ongoing relationship and that committed behavior ensures maximum efforts at maintaining the relationship”.

The commitment of both parties is regarded as a key component in the success of SD (Mortensen and Arlbjørn, 2012; Wouters et al., 2007; Wagner and Krause, 2009; Handfield et al., 2000; Krause and Ellram, 1997a,b; Hartley and Choi, 1996). However, buying firms affirm that gaining the commitment of suppliers’ top management is the most important success factor for an SD program because management sets objectives, provides resources, removes barriers and rewards change (Hartley and Choi, 1996).

Commitment evolves with time and is enhanced by communication. Hence, the structure and content of communication as an influence strategy of the buying firm used to change the behavior or performance of the supplier enhances commitment (Ghijsen et al., 2010). It is worth noting that, SD efforts is highly demanding in respect of long-term commitment in order to achieve desired outcomes (Talluri et al., 2010).
3.2.4. Summary of the Success Factors of Supplier Development

Refer to above-mentioned issues, the buyer- and supplier-specific as well as interface success factors between buyers and suppliers are revealed in the Figure below.

![Figure 3.3: Summary of Success Factors of SD](source: Own Creation)

3.3. Barriers of a Supplier Development

SD programs are not always successful i.e. even if both the buyer and its supplier agree that SD can be regarded as a cornerstone for achieving mutual benefits, success is not always a foregone conclusion (Handfield et al., 2000). This is why it is important to understand what kind of barriers might hinder the success of a SD program and efforts so as to possibly avoid them. Handfield et al. (2000) and Krause et al. (1999) demonstrate the potential barriers related to buying firms, their suppliers as well as the interface pitfalls that SD efforts might face.

3.3.1. Supplier-specific Barriers

Handfield et al. (2000) report that usually, more than half of the identified pitfalls in SD lie within the supplier-specific category.
3.3.1.1. The Supplier’s Lack of Commitment

Previous studies illustrate that there is a link between SD initiatives and supplier's commitment (Nagati and Rebolledo, 2013; Krause, 1999). Lack of supplier’s commitment in terms of loyalty, seeking a long-term alliance, resource investment, patience with buyers in difficulty (Krause, 1999), expectations of relationship continuity (Prahinski and Benton, 2004) and lack of total quality commitment by suppliers (Handfield et al. 2000) hinder the buying firm’s willingness in SD efforts with that supplier (Krause, 1999). Hence, the buying firm may be unable to meet its business objectives (Prahinski and Benton, 2004; Handfield et al. 2000).

Further, it is asserted by Handfield et al. (2000) that a supplier’s commitment is assessed through the buying firms’ perception of whether the supplier takes the feedback seriously, the supplier’ failure in training sessions or realizing significant operational results as requested. This is supported by Krause (1999) who assert that the buying firm must perceive evidence associated with some level of supplier’s commitment to the relationship as well as SD efforts in order to reduce and eliminate the uncertainty about relationship continuity and long-term benefits. Otherwise, the buyer itself might be reluctant to be committed to its supplier.

3.3.1.2. Insufficient Supplier Resource

Shortage in supplier resource such as engineering resources, equipment, information systems, and employee skills is another pitfall to SD efforts (Handfield et al. 2000) which hinder competence and competitiveness of the supplier (Krause et al., 1999). The buying firm depends on its supplier’s abilities to provide a competitive product or service, hence the supplying firm must be competitive to some extent e.g. in quality or lead times. This barrier usually is seen in small supplier in terms of annual sales volume and the percentage of the suppliers’ sales to the customer firm than larger one (Krause et al., 1999). Furthermore, the efficacy of SD efforts relies on existing capabilities of a supplier (Talluri et al., 2010) therefore; insufficient resources of the supplier might affect the SD programs success.
3.3.1.3. The Supplier Complacency

Lascelles and Dale (1990) studied about 300 suppliers who claimed to know the measurement relating to their customer’s (buying firms) satisfaction associated with the quality of the product/services i.e. what factors really sell their products in terms of quality, price and delivery time. However, according to the analysis they were mostly subjective and did not have quantitative or proactive measure (e.g. market research activity and advanced quality planning carried out in conjunction with customers and competitive bench-marking) of their customer satisfaction. In other words, “no news is good news” (p. 49) for them and thus, suppliers did not think what their customer really think and need. It can be noticed that this kind of attitude by supplier can hinder the buying firm satisfaction and willingness to involve in SD efforts effectively.

3.3.1.4. The Supplier’s Reluctance to Supplier Development

Unwillingness of suppliers to join in SD efforts is another major pitfall in SD which may take place through different reasons. The lack of freedom that a supplier might experience during its involvement in SD might reduce enthusiasm to tie itself to the buying firm and consequently does not follow SD program completely (Galt and Dale, 1991). The success of a SD can be threatened if supplier cannot perceive a tangible evidence for support from the buying firm with matched resources (Krause et al., 1998). The difficulty for suppliers’ top management to accept other ways of doing things may be a serious hindrance to implement SD. This is obvious when a supplier manager taking part in a research said “to agree to participate in SD, you have to eat your pride” (Hartley and Choi, 1996, p. 38).

3.3.2. Buyer-specific Barriers

The second area of barriers in SD efforts concerns the buying firm. The barriers originating from a buying firm can examined in six domains.

3.3.2.1. Lack of Buyer’s Top Management Support

The need for a SD program must first be recognized and accepted by the top managers of the buying firm who determine to improve the firm's competitive position (Hahn et
In this regard, top managers should have a better understand of SD programs (Smeltzer, 1997) and must focus on their SD program implementation efforts (Prahinski and Benton, 2004) so the buying firm’s commitment can be perceived by the supplier.

Without top management support, the buying firm is vulnerable failure in allocating ample resource in SD efforts (Humphreys et al., 2011; Handfield et al. 2000), supplier’s commitment will be hindered and supplier’s top management green light to cooperate effectively might be lost (Handfield et al., 2000) and thus achieving competitive benefits that can be derived from effective SD will be in danger (Krause, 1999).

3.3.2.2. The Buying Firm’s Credibility to its Supplier

Receiving product/service in a good quality is an integral part of purchasing practices and quality management issue is observed as an inevitable part of SD efforts (Wagner, 2006b) therefore, the supplier need to be convinced that the buying firm is sensitive about quality improvement which contributes to building the buying firm’s credibility. To do so, the buying firm should transfer its quality expectation through its behavior and attitudes i.e. purchasing strategy, supply management practices, the quantity of return product report due to poor quality, production schedules as well as engineering design/production/supplier liaison.

The buying firm’s acceptance of non-conforming items over a long period of time and criticism of its vendor, last minute changes to schedules, poor purchasing, and frequent switches from one supplier to another lead to the credibility gap in the buyer-supplier relationship. Thus, supplier is likely to question the adequacy of the purchaser's quality assurance system in detecting non-conforming product and thus the buying firm’s credibility is undermined in the eyes of the supplier (Lascelles and Dale, 1990).

3.3.2.3. Bias-related Barriers

This pitfall usually occurs when the supplier is a small company (based on the definition by Krause et al., (1999)) compared with other large suppliers in the network. In this regard, the buying firm is likely to present more strong corporate commitment to large suppliers. Therefore, the small supplier will be more vulnerable to miss the benefits of SD efforts than large ones. Additionally, it is difficult for the small supplier to expand
the level of business with its buyer due to existence of “old-boy network” (Krause et al., 1999, p. 39). This bias against the small suppliers (less percentage sales to buyer) is a pitfall of SD with such suppliers.

Furthermore, Li et al. (2012) assert that without a buying firm’s commitment, the suppliers may be reluctant to make changes in their operations to justify the requirements of that specific buying firm. Hence, it is considerable that those suppliers with less percentage of the sales to the buying firm are less dependent on the buyers than their high percentage counterparts (Krause et al., 1999) and this could be regarded as a hindrance to SD efforts.

3.3.2.4. The Buying Firm’s Effectiveness

Krause et al. (1999) report that supplying firms generally indicate that SD efforts do not reduce their obstacles in doing business with buying firms. Thus, the suppliers question the effectiveness of SD programs as well as the associated buying firms in helping them to survive, grow and be profitable.

3.3.2.5. Misguided Supplier Development Objectives

Buying firms often do not realize the true meaning of SD programs associated with its demands as well as outcomes respectively. For instance, according to suppliers’ standpoint, the buying firms do not understand the basics of TQM. As Lascelles and Dale (1990, p. 49) assert that “Many [buyers] have formal vendor audit programs but no clear SD objectives”.

3.3.2.6. The Buyer’s Reluctance to Supplier Development

The buyer’s reluctance to put an effort and commit to the SD efforts is seen as a barrier in SD’s success which may occur when obvious potential benefits cannot be realized or SD practices may not justify small-quantity purchases from numerous suppliers. Moreover, the buyer might concern the specific supplier not important enough for the SD investment and thus its willingness to SD decreases (Handfield et al., 2000) or the supplier does not have compatible strategic objectives with its customer i.e. the buying firm (Humphreys et al., 2011). Lofty expectations that go unrealized (Handfield et al.,
2000) as well as lack of immediate return (Talluri et al., 2010) may lessen the buyer’s readiness for SD efforts.

3.3.3. **Buyer-Supplier Interface Barriers**

The final type of barriers of SD can be occurred in the interface between buyers and suppliers areas.

3.3.3.1. **Lack of Trust**

In the previous section– success factors to SD programs, it has been discussed that trust is a cornerstone of any kind of relationship between the buyer and the supplier. It promotes commitment in exchanges between partners i.e. better communication and information and knowledge sharing and thus improves participation in SD as well as minimizes opportunistic behaviors (Nagati and Rebolledo, 2013; Zahng et al. 2011; Wu et al., 2011; Wagner, 2011; Hernández-Espallardo et al., 2010; Ryu et al. 2009).

Lack of trust is a big challenge in SD efforts (Handfield et al., 2000). Tomkins, (2001) considers the use of information in inter-firm relationships associated with two concepts; information and trust. In this regard, as Terpend et al. (2008) mention, the extent of information sharing depends on the degree of mutual trust. Interestingly, Handfiled et al. (2000) argue that the relationship between information sharing and trust is a two-way highway. Inter-organizational relationship demand partner’s selective information promulgated via explicit or implicit methods (Ryu et al, 2009). When suppliers prevent to release sensitive and confidential information e.g. regarding costs, processes and operations etc. to the buyers which is necessity for SD practices, the success of SD will be in danger. Ambiguous or intimidating legal issues and ineffective lines of communication also are considered as constraints on trust building and successful SD efforts (Handfield et al., 2000).

The supplier and buyer’s wrong perception in different aspects like fear of competitors acknowledgement in the SC and using the information exchanged opportunistically, arm's length relationships and ineffective purchasing strategies lead them not to be open to each other (Nagati and Rebolledo, 2013; Handfield et al., 2000). As Wagner et al. (2011, p. 42) assert “A supplier can have a great reputation and a promising future with
a buyer but if the buyer loses confidence in the supplier’s trustworthiness during a specific project, the future of the relationship could be in jeopardy”.

3.3.3.2. Poor Alignment of Organizational Cultures

When any condition in buyer-supplier relationship is changed, the existing successful SD approach might be no longer feasible. Changes might be taken place in the SC nature, new supplier entrance, shift in geographical location and expectation changes etc. consequently, some misunderstanding could occur for supplier due condition changes, hence it would be necessary to spend considerable time communicating with suppliers and showing them what is needed (Handfield et al. 2000).

3.3.3.3. Insufficient Inducements to the Supplier

Supplier incentives can be considered as a mechanism, which stimulates SD practices and focuses on the supplier’s improvements and great achievements (Wagner 2010, Krause et al., 2000; De Toni and Nassimbeni, 2000). In this regard, ineffective methods and insufficient communication regarding potential benefits of SD efforts might reduce the suppliers’ enthusiasm and the commitments to the program (Handfield et al. 2000).

3.3.3.4. Poor Communication and Feedback

Many scholars declare that poor communication and feedback in the interface between the buying firm and the supplier act as a barrier which defeats the SD process and hinders supplier performance improvement (Humphreys et al., 2011; Lawrence, 2004; Handfield et al. 2000; Krause et al. 1999; Krause and Ellram, 1997a; Lascelles and Dale, 1990). The need for effective communication encourages the use of maximum communication but does not guarantee a good functioning of buyer-supplier relationship. Rather too much communication may lead to information overload that can possibly act as a barrier and bring adverse results. Thus, an acceptable level of communication should be used which minimizes ambiguity in messages in order to be effective and efficient (Hoegl and Wagner, 2005 cited in Ghijsen et al., 2010).

On the one hand, Lascelles and Dale (1990) exemplify most dissatisfied supplier do not share their dissatisfaction to the buyer and vice versa due to the partners’ inability to
communicate clearly their requirements or due to lacking of appropriate opportunity which is raised from another party in order to communicate effectively. On the other hand, Lawrence, (2004) discuss that the perception of partners never being the same in terms of their demands and expectation (specific or general). This misguides partners to portrait an accurate picture of another one in terms of demands and requirements thus leads to non-response feedback.

Furthermore, evidence demonstrates that usually a buying firm shares its expectations and asks its supplier for performance improvement and process. However, revers information sharing and feedback is least and a supplier is seldom asked for expectations and feedback of the buyer’s performance. This limited view that most buyers take to communication i.e. information sharing creates the perception gaps and hamper partnership development as well as SD’s success (Lawrence, 2004). This is supported by Krause et al. (1999) who reveal that suppliers specially smaller ones have communication problems in the areas of advertising to the customer, obtaining bidding information, and being known by the customer firm’s buyers or claim the buying firm knows very little about them.

Interestingly, Dyer and Hatch, (2006) point out, poor information and knowledge transfers might because of unreliable knowledge source (e.g. lack of motivation, lack of credibility), problems in the recipient of knowledge (lack of absorptive capacity, lack of motivation), or attributes of the knowledge itself (causal ambiguity).

Regardless what are the reasons behind poor communication and transferring of knowledge, the relationship between partners might ruin and be unsuccessful; the SD benefits would not be ample for further investments (Talluri et al., 2010).

3.3.3.5. Power Related Issues

Power dependence (Krause’s et al., 1999) and purchasing power (Lascelles and Dale, 1990) are recognized as SD barrier associated with power issue (Mortensen and Arlbjørn, 2012).

Regardless of how the sample was split in terms of size, annual sales or partnership period in the study by Krause et al. (1999), it reveals that usually suppliers have problem with their buying firms in obtaining favorable terms during negotiations i.e. the
buying firms have more power than their suppliers. It is more significant in small suppliers when they complain about the buying firms only placed small orders with their firms.

The lack of success in SD program associated with supplier quality performance improvement may result in lack of buying firm’s power in terms of purchasing which has a major influence on buyer-supplier relationship. Purchasing power enables suppliers to improve the quality of their products-performance without necessarily helping them to develop a company-wide approach to quality management (Lascelles and Dale, 1990).

3.3.3.6. Lack of Profitability

Both buyer and supplier should perceive their commitment and investment in SD is profitable in terms of tangible or intangible (Hartley and Choi, 1996), direct or indirect (Wagner, 2010), short- or long-term (Krause and Ellram, 1997b). Otherwise, the motivation for engaging in SD is in considerable danger which is more apparent specifically for suppliers who illustrate “doing business with this buyer is not very profitable for the firm” (Krause et al., 1999, p. 37). As a result, it might lead to misunderstanding in terms of who pays and who gains more (New and Burnes, 1998).

3.3.3.7. Risk of Losses

Buying firms should pay special attention to direct development efforts in SD because they include transaction-specific investments in the supplier by the buying firms. In the long-term, direct involvement investments may reduce the buying firms’ transaction costs and uncertainty regarding important manufacturing inputs. However, it may also include a risk to the buying firm because these investments are nontransferable and the payback of the SD investment are unrecoverable for the buying firm if the relationship breaks up in an early phase between a buying firm and its supplier (Krause et al., 2000). The use of knowledge-sharing routines is considered to be both costly and risky because a great deal of time and resources may be required to support the transfer. Moreover, these investments are relationship-specific and create a lock-in condition which brings vulnerability because the buying firm cannot leave the relationship with the supplier
firm without incurring economic losses (Wathne and Heide, 2000 cited in Hernández-Espallardo, 2010).

3.3.4. Summary of the Barriers of Supplier Development

Figure below summarizes aforementioned pitfalls in terms of buyer-, supplier-specific as well as interface barriers between buyers and suppliers.

**Figure 3.4:** Summary of Barriers to SD

**Source:** Own Creation
4. Empirical Data

This chapter presents empirical data collected from the interviews from three dyadic cases in terms of this study which is supplier development. Five companies have been interviewed which cooperate based on the existence of SD efforts within their relationship. This chapter starts with a brief company presentation, then is followed by a demonstration of all the collected data associated with each company’s view about practices, successes factors and barriers in its relationship with the other company in the buyer-supplier dyads.

4.1. General information of Dyads

The companies comprise two buying firms as the focal companies and three relevant main suppliers. The first focal company has two suppliers and the second one has one supplier that consequently form the three dyadic relations within the scope and context of this research. Figure 4.1 and Figure 4.2 reveal the three dyads that are under investigation for SD.

Figure 4.1: Visualization of Dyad I and Dyad II
Source: Own Creation
The Table 4.1 and 4.2 summarize the general information and the background of each examined company that has been interviewed in respect of the research questions.

<table>
<thead>
<tr>
<th>Buyers</th>
<th>Company Name</th>
<th>Date of Registration</th>
<th>Number of employees</th>
<th>Main Products</th>
<th>Annual Turnover (2012)</th>
<th>Volume of Sales (2012)</th>
<th>Certificates</th>
<th>Web Site</th>
</tr>
</thead>
</table>
### Table 4.1: The Buyers’ General Information

**Source:** Extracted from interviews, companies’ documents and respective website

<table>
<thead>
<tr>
<th>Suppliers</th>
<th>Date of Registration</th>
<th>Number of employees</th>
<th>Main Products</th>
<th>Annual Turnover (2012)</th>
<th>Volume of Sales (2012)</th>
<th>Certificates</th>
<th>Web Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>“CLASSIFIED” Mentioned as Petrochemical Company</td>
<td>1990</td>
<td>“CLASSIFIED”</td>
<td>HDPE, SBR ABS, PS Ethylc Alcohol</td>
<td>&quot;CLASSIFIED&quot;</td>
<td>€362,000,000</td>
<td>ISO 9002: 1994 ISO 9001: 2000</td>
<td>-</td>
</tr>
</tbody>
</table>

### Table 4.2: The Suppliers’ General Information

**Source:** Extracted from interviews, companies’ documents and respective website

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4.2. **Dyad I – Persian Sanat Baharestan Manufacturing Co., and the Iranian Petrochemical Company**

The first dyad is the collaborative relationship between Persian Sanat Baharestan Manufacturing Co., and its immediate key supplier of plastic raw material. Persian Sanat Baharestan Manufacturing Co., is a manufacturer of plastic pallets and auto component. This company will from now on be called Baharestan. Iranian Petrochemical Company is a supplier of plastic raw material and will from now on be called Petrochemical Company. The supplier wishes to keep its name confidential.

4.2.1. **Perspective of Baharestan as the Buyer of Petrochemical Company**

The following information is extracted from interview (08-04-2013) with Mr. Seyed Javad Mirheidari, managing director as well as the owner of Baharestan in respect of the company’s perspective about the collaboration i.e. the SD efforts with its supplier-Petrochemical Company.

Petrochemical Company is one of the main producers of High Density Polyethylene (HDPE) material in the country that can meet Baharestan’s needs. According to regulations of oil ministry the Petrochemical Company dedicates defined amount of raw material to each consumer in this industry.

4.2.1.1. **The story of Supplier Development Practices from Baharestan’s Perspective**

Baharestan has started the business relationship with Petrochemical Company exactly after foundation in 2008, although the owner has been working with the same supplier since 1995 in his former manufacturer companies through simple placing order and receiving goods. Petrochemical Company is the main and the most important supplier of various kinds and grades of virgin plastic raw material for Baharestan.

Baharestan had received raw material in one ton Jumbo bags or 25 Kg Poly Propylene (PP) Bags. Thus, received goods in such packages caused a lot of problems in receiving accurate quantity in a safe manner. Deficient bulk bags caused waste of actual material during up-loading, transporting, off-loading and storage processes as well as...
discrepancy in received quantity and respective packing list which were not ignorable. Furthermore, Jumbo bags could not be stored for a long time in the Baharestan’s warehouse due to their vulnerability to be torn. They could also be torn during transferring from warehouse to production line by lift trucks. According to expensive price of virgin material, the buyer faced noticeable costs and economic losses due to the waste at the end of each year. These failures affect the final price of finished product negatively and final customers’ dissatisfaction especially in export mode.

In this regard, Baharestan had presented new idea based on new package design in late 2008 in order to receive ordered raw material with better packaging quality after dispatching from the supplier’s. As Baharestan is a plastic pallet producer, it was suggested to produce specific plastic pallets (1300X1100X150 mm), send to the supplier’s in order to deliver the material to them and thus minimize the level of defects. This project was accepted by Petrochemical Company through a one-year contract with Baharestan, which had to produce pallets (5000 Pcs) not only for its demands but also according to Petrochemical Company’s needs. This meant that the supplier improved its packaging for all its customers (more than 2700 manufacturing companies in Iran).

This suggestion required new design and actions in Petrochemical Company’s production and packaging lines in order to stack the material (1250 Kgs in 25 Kg bags) on each pallet and shrink them automatically. Further, Petrochemical Company created new grade of HDPE to produce these pallets. It strengthens the tolerance of the pallet noticeably and thus its life time. Baharestan needed to allocate ample resource in order to add a new injection mold compatible with the new grade of material to its production line. Moreover, Baharestan must commit to use delivered new virgin raw material to produce only this kind of plastic pallets exclusively for Petrochemical Company. The responsibility of pallets associated with collecting from other manufacturers, maintaining or replacing was on Baharestan. Although the quality of deliveries has increased considerably and the waste of raw material has been lessened, this project did not have economic justification for Baharestan. The cost of collecting all pallets from all around Iran was high and not easy due to Baharestan’s weakness in logistic issues as well as high cost of local transportation.

In late 2009 and early 2010, above contract has been modified into a 5-year contract with considerable changes. According to new agreement, the delivered pallets to
Petrochemical Company are not collected by Baharestan and thus Petrochemical Company is the owner of pallets. The supplier has to supply required virgin raw material to Baharestan for free and pays respective production cost/kg/pallet.

Generally, Baharestan has established its cooperation with Petrochemical Company due to its demand of plastic virgin raw material. According to organization structure of the supplier it is not feasible to build closer relationship and except more cooperation in packaging.

<table>
<thead>
<tr>
<th>SD Practices</th>
<th>Explanations of the SD Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buying from alternative suppliers to provide competition for current suppliers (Competitive pressure)</td>
<td>The requested plastic virgin raw material is monopolized in Iran. Therefore, building competitive atmosphere is not possible for consumers.</td>
</tr>
<tr>
<td>Evaluation of supplier performance (Supplier evaluation)</td>
<td>Petrochemical Company follows German DIN and/or American ASTM test methods. Thus, random testing of received material in the buyer’s laboratory is applied based on mentioned methods. However, according to current economic sanctions on Iran, received quality may differ from the same in the last year. For instance, Petrochemical Company cannot import some special catalysts which affect the quality and specification of current production. Control the quantity with respective packing list with ±1% discrepancy. The report of abovementioned issues are prepared and submitted to Petrochemical Company per week as well as per month.</td>
</tr>
<tr>
<td>Buying from a limited number of suppliers per purchased item</td>
<td>Petrochemical Company is one of exclusive producers of HDPE material. However, if it cannot supply a specific material when it is needed due to various reasons such as empty stock, sanctions problems or annual overhaul, Baharestan is supplied by the black market from those who has purchased the same material from Petrochemical Company in the past.</td>
</tr>
<tr>
<td>Raising performance expectations</td>
<td>Baharestan expects better delivery time and lead time since Petrochemical Company mostly pays attention to the on-time delivery for packaging purpose rather than other orders. Regarding price reduction, Petrochemical Company formulates all prices: world FOB price of each material/ton – 5% which is dictated from the government.</td>
</tr>
<tr>
<td>Communication and feedback</td>
<td>Baharestan contacts this supplier at least 3 times a week in order to share their requirements; represent previous deliveries feedback (weekly and monthly reports) as well as being notified about any related news in plastic industry. The communication is too formal.</td>
</tr>
<tr>
<td>Knowledge Transfer</td>
<td>Technical information sharing is high in volume and frequency from Baharestan’s side. As Petrochemical Company produces based on the quality standards and protocols it might not be practical in production process. Production engineers of Baharestan share the technical advices e.g. changing the melting point, adding new additive and UV stabilizer etc. through written report as well as inviting the supplier’s personnel in the production line.</td>
</tr>
</tbody>
</table>
Promises of increased current and/or future business if supplier performance improves (Supplier incentives)

Baharestan promises to prolong current contract if the supplier is committed to follow palletized packaging system as well as increase the quality of required raw material according to Baharestan’s technical feedback in order to achieve better finished product.

Site visit

Baharestan does not have any power to have site visit.

Long-term contract

Baharestan tends to extend the current 5-year (finishes 2015) contract to 10-year (up to 2025)

Technical assistance in improving suppliers’ parts and materials

Baharestan submits reports of non-conformance material and follows up the supplier’s reaction through inviting its engineers to have a site visit in order to present the problems and having technical discussion in the production process.

Petrochemical Company's R&D are more experienced and skillful than Baharestan’s, therefore, sometimes these can be regarded as a suggestion or problem statement rather than assistance.

The company provides appropriate on-site facilities for new material tests in the production line.

Expectation of Supplier’s certification

Baharestan is not in a technical position in terms of polymeric knowledge to expect certificates.

Intensive information sharing

Information sharing in terms of export issues (both companies have exports) or technical and production process information that it is mandatory for the production line.

The supplier shares polymeric news, technical information for production as well as material prices in domestic and international markets.

Training and education of a supplier’s personnel

Baharestan receives the supplier’s advice in respect of mold design (e.g. mold flow or number of runners in the mold) based on the material types and grades.

Exchange of personnel between the two firms

In the past, Baharestan had two verifiers in Petrochemical Company in order to monitor the safety of delivered pallet in the reaching point as well as identify the damage origin if any (from Baharestan, during delivery, in the supplier’s side).

Supplier involvement in the buyer’s NPD and development

Baharestan provides Technical assistance in improving suppliers’ parts and materials.

The company provides appropriate on-site facilities for new material tests in the production line.

Table 4.3: SD Practices from Baharestan’s Perspective as the Buyer of Petrochemical Company

Source: Own creation

4.2.1.2. Success Factors of Supplier Development from Baharestan’s Perspective

- **Buyer-specific Success Factors**

**Long-term strategic goals:** Baharestan explains its strategic goals for receiving virgin raw material with no defected packaging and waste as well as better quality specifications. It can be achieved through strengthening the relationship with
Petrochemical Company. Baharestan has defined new project besides providing plastic pallets in order to increase its supplier performance. Its target is to produce new packaging design-plastic box pallet which is supposed to be safer in carrying the raw material. In this respect, Baharestan is expanding its site space for new machineries and warehouse in order to stock the box pallets since this product is space consuming compared to pallets.

**Top management support:** The managing director of Baharestan— the respondent declares that “the top management is aware of the benefits that the company can obtain through more collaboration with Petrochemical Company”. Therefore, they put considerable efforts to meet Petrochemical Company’s requirements associated with plastic pallets production (ample, accurate, qualified and timely deliveries), invests in new human resource in order have a common polymeric language with the supplier and allocates resources in technical equipment in the laboratory to have a reliable material test.

**Power Influence Strategy in SD:** As Baharestan is a producer of plastic products and is regarded as small company in terms of size and percentage of sales compared to the supplier; it is paid less attention by Petrochemical Company. The respondent mentions that “there is no room for more development of Petrochemical Company’s capabilities through influencing power such as threat, legal or promise issues”.

**Buyer commitment:** Baharestan finds out that the more it commits to SD efforts, the better virgin material receives. The respondent highlights that “we show our commitments through the mutual contract and the specific investments in the injection mold only for this supplier. This type of pallet is not attractive product for other customers”.

➢ **Supplier-specific Success Factors**

**Supplier’s expectations in its strategic objectives:** Baharestan is sure that customer’s satisfaction of the supplier is increased dramatically in local as well as international markets due to packaging condition improvements. Furthermore, this packaging design increases the supplier’s performance in terms of better and safe delivery condition and reduces the packaging cost since these plastic pallets are endurable as well as the waste
quantity is decreased in Petrochemical Company’s site. The respondent adds “who does not want this improvement and does not have such goals?”

**Conformity of supplier’s capabilities:** According to Baharestan’s perspective, the supplier improves the material quality and specification to be compatible with production process i.e. it reduces the deficiency or polymeric problems of raw material according to Baharestan’s feedback and technical suggestions.

**Supplier’s commitment:** This supplier is committed to required quality specification based on the present resources and the contract in terms of delivering raw material for free to produce those specific pallets. However, there is low commitment in respect of other material requirements associated with timely delivery.

*Buyer-supplier Interface Success Factors*

**Knowledge sharing and transfer:** Baharestan invites Petrochemical Company’s engineers for on-site visits in order to share the know-how and experience when new raw material tests in the production line or when there are polymeric problems or deficiencies in substances during production such as melting point, material flow in the mold etc. According to these feedbacks, Petrochemical Company usually modifies current or new material to improve the quality i.e. specification of raw material for better finished product. Furthermore, Baharestan receives technical assistance of Petrochemical Company’s experts in order to improve the design of new mold in order to be adapted with the supplied raw material. It is vital to note that “the mold design (technical design of runners, water flow, injection points etc.) must match with the used material to increase the production quality, mold life time, to lessen the waste as well as to reduce cycle time and percentage of material usage during production”.

**Trust:** According to the buyer’s point of view, some level of trust has built up between two parties over time. Petrochemical Company provides virgin raw material to Baharestan without any verifiers during production. Baharestan in turn is committed to use only received material to produce required pallets. The respondent emphasizes that “it is easy to manipulate the material in production and use a percentage of recycled material instead of 100 % virgin in finished product which leads to use those stolen material opportunistically in the black market”.

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However, based on “tall hierarchical structure of Petrochemical Company” the respondent adds that Baharestan is faced with some sort of problems to go beyond the present level of trust.

**Communication methods and effective communications:** The most routine methods of communication between both parties are fax and telephone. However, Baharestan declares that it suffers from formal bureaucratic principles when asking for feedbacks or response. The supplier needs many following up telephone and fax which makes the communication slow between them. The reason might be the governmental nature of Petrochemical Company with tall hierarchical structure. Moreover, different divisions of Baharestan cannot contact to desired division or department in Petrochemical Company and all contacts should be initiated and followed through sales department which makes the speed of communication slow. “Arm’s length relationship can be regarded as one of the important difficulties in the relationship” as the respondent adds.

**Long-term commitment:** The current sanctions on oil and petrochemical industries play a vital role in the supplier’s deficiencies and commitments associated with quality, delivery time when the respondent of Baharestan points out that “Of course it is not because of the supplier’s reluctance to commit to the present SD efforts, so we have to accept as it is”.

### 4.2.1.3. Barriers to Supplier Development from Baharestan’s Perspective

- **Buyer-specific Barriers**

**Lack of Buyer’s top management support:** Baharestan demonstrates its top management supportive behavior.

**The buying firm’s credibility to its supplier:** Baharestan is strict to received quality and thus its credibility to this supplier as well as its final customers. In this respect, the company has its own control quality laboratory to test the raw material as well as finished products in order to meet international standards. Satisfaction and dissatisfaction of each delivery are submitted to Petrochemical Company frequently and expects respective improvement. Poor quality material affects directly to the products’ quality and hinders Baharestan’s reputation in the local and international markets.
Nevertheless, quality expectations are not answered always due to current restricted resource of the supplier.

**Bias-related Barriers:** Baharestan states that more than 90% of its annual purchase belongs to Petrochemical Company and thus it is heavily dependent to this supplier. As this supplier is the monopolized domestic provider of HDPE material, it is necessary to pay noticeable attention which is demonstrated through the willingness of Baharestan to have continuous long-term relationship to achieve long-term partnership. Interestingly, according to Baharestan, the size of its suppliers is not the reason of attention but the suppliers’ role in the buyer’s survival.

**The buying firm’s effectiveness:** Baharestan demonstrates that the present SD efforts are quite effective for this supplier’s performance in terms of packaging development and consequently decreases waste, storage space and increase effective delivery and transportation in both parties.

**Misguided SD objectives:** Baharestan attempts to transfer its objectives and plans as clear as possible in a way to form an atmosphere that Petrochemical Company can be aware of potential benefits. However, since Baharestan is a manufacturer of plastic products and thus “a consumer in the eyes of the supplier”, it does not have considerable influence on Petrochemical Company, so its strategic goals or long-term plans are not attractive for the supplier.

**The buyer’s reluctance to SD:** Baharestan declares its tenancy to expand its relationship.

- **Supplier-specific Barriers**

**The supplier’s lack of commitment:** Low commitment of the supplier can be seen in late delivery time as well as dissatisfactory quality. This leads Baharestan to miss golden-time to provide the orders on time with acceptable quality.

**Insufficient supplier resource:** Petrochemical Company is behind its preplanned improvement phases in terms of increase the production volume. According to Baharestan’s best of knowledge, this supplier’s production capacity should have been 500,000 tons/month by now. However, its production volume is still 150,000
tons/month; thus, all manufacturers including Baharestan face a shortage of raw material.

**The supplier complacency:** Baharestan complains that it is never asked for satisfaction or dissatisfaction. It should be transferred from its side and attempt to receive reasonable feedback and response although the supplier has to distribute satisfaction and dissatisfaction forms according to ISO 9001:2000 but this process is artificial.

**The supplier’s reluctance to SD:** As per the knowledge of Baharestan, the production volume of Petrochemical Company has decreased vividly since last two years due to economic sanctions and shortage of substances. Thereby, the supplier does not demonstrate considerable willingness to fully involve in the development in terms of packaging. In this regards, Baharestan has to be more creative to motivate this supplier to be engaged in performance development e.g. box pallet project.

- **Buyer-supplier Interface Barriers**

  **Lack of trust:** “Petrochemical Company is the mother company of plastic manufactures in Iran” the respondent says about the supplier. Therefore, it is claimed that all polymeric consumers are welcome to be a partner rather than a simple customer; however, Baharestan finds out the nature of government-oriented of the supplier does not prepare the basis to have an open relationship and thus building high level of trust with such relationship near to arm’s length is not achievable.

  **Insufficient inducements to the supplier:** Baharestan cannot motivate the supplier through incentives due to the governmental nature of the supplier.

  **Poor alignment of organizational cultures:** Baharestan does not mention any considerable issues.

  **Poor communication and feedback:** Usually Baharestan cannot find right person to communicate in terms of different issues in its supplier. Slow speed of response from the supplier hinders the mutual and effective two-way communication. Decentralization of Petrochemical Company in different geographical location and not being known enough by this supplier are seen as other difficulties in the communication.

  **Power related issues:** Generally, Baharestan does not have bargain power associated with material price, delivery time and quality. Most strategies and conditions are
dictated by petrochemical Company in the business negotiations. Baharestan’s respondent states that “it is originated in its volume of purchase which is less than 1% of Petrochemical Company’s volume of sales”.

**Lack of profitability:** Baharestan notes that the SD program is profitable for both parties to increase the performance of the supplier.

**Risk of losses:** If Petrochemical Company shifts to other suppliers to be provided with special pallets, Baharestan will waste noticeable amount of investment in molds, equipment and human resource for these types of pallets.

### 4.2.2. Perspective of Petrochemical Company as the Supplier of Baharestan

The respondent in this interview (11-04-2013) on behalf of Petrochemical Company as a supplier of Baharestan is the sales officer who has been working in this firm for about 4 years. The name of respondent is asked to be anonymous.

For the purpose of this research the respondent is asked for the perspective of the company about the collaboration with Baharestan and respectively about the SD efforts.

#### 4.2.2.1. The story of Supplier Development Practices from Petrochemical Company’s Perspective

The Petrochemical Company has started to deal with Baharestan from 2008. The owner (managing director) of Baharestan is well-known for the company since 1995 in his previous manufacturer companies.

From 2009 to 2010 Petrochemical Company temporary agreed to rent plastic pallets from Baharestan to carry the raw material on them (5000 Pcs in the first year) for better delivery condition instead of delivery in bulk packages. This cooperation has established due to the customers’ complaints of poor conditioned packages – bulk packaging which resulted in considerable amount of waste during transportation and in their sites as well as inaccurate delivered quantity etc.

Baharestan buyer was responsible for delivering them to Petrochemical Company according to pre-set schedules, collecting the same (damaged and non-damaged) from Petrochemical Company’s customers all around Iran. Petrochemical Company supplies
new specific raw material only to produce two types of pallets exclusively. Based on some problems that Baharestan had declared, the agreement was modified in a way that Petrochemical Company supplies specific HDPE material and is committed to pay the production cost/Kg/pallet to Baharestan. It should be noted that the virgin material is produced in Petrochemical Company particularly for producing these kinds of pallets and thus this material is not for sale to any other customers. This new agreement was signed in early 2010 and shall be valid for five years.

<table>
<thead>
<tr>
<th>SD Practices</th>
<th>Explanations of the SD Practices</th>
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<tbody>
<tr>
<td>Buying from alternative suppliers to provide competition for current suppliers (Competitive pressure)</td>
<td>There is no competitive atmosphere due to monopolistic situation. Petrochemical company sets purchasing strategies rather than accepting from its customers.</td>
</tr>
<tr>
<td>Evaluation of supplier performance (Supplier evaluation)</td>
<td>Technical tests and quantity evaluation are done upon each delivery and the company receives the respective reports. Nowadays, quality deficiencies in some grades of raw material and late delivery time are the main problems. This is due to the economic sanctions on Petrochemical Company that leads to shortage in some special additives or catalyst which in turn affects required quality and timely deliveries.</td>
</tr>
<tr>
<td>Buying from a limited number of suppliers per purchased item</td>
<td>The Petrochemical Company is an exclusive producer of all grade of polymer material. So, due to competitive price there are no alternative foreign competitors too.</td>
</tr>
<tr>
<td>Raising performance expectations</td>
<td>Petrochemical Company is asked for better delivery time and/or raw material specification and price reduction. It tries its best to meet this customer’s requirements.</td>
</tr>
<tr>
<td></td>
<td>However, the price is always fixed from top management (International FOB price of raw material minus 5 % for all local customers) according to international oil price and there is no room for negotiation.</td>
</tr>
<tr>
<td>Communication and feedback</td>
<td>Besides receiving regular orders, Petrochemical Company gets frequent reports through fax and sometimes verbally through telephone (2 to 3 times/week) in terms of the customer’s satisfaction and dissatisfaction. The feedback is sent respectively.</td>
</tr>
<tr>
<td>Knowledge Transfer</td>
<td>Petrochemical Company does not receive any knowledge from this buyer except some sort of technical information regarding material specification which demonstrates it is compatible in production or not.</td>
</tr>
<tr>
<td></td>
<td>Petrochemical Company prepares annual seminars for all customers to share knowledge about new issues in polymer industry as well as technical information of new and old material grades and new decisions and strategies of the company.</td>
</tr>
<tr>
<td>Recognition</td>
<td>“Petrochemical Company is the most well-known raw material supplier in Iran and does not need recognition”.</td>
</tr>
</tbody>
</table>
### Promises of increased current and/or future business if supplier performance improves (Supplier incentives)

Confirmation of the material especially new ones by the owner of Baharestan could be seen as a recommendation of the quality to other manufactures in the same industry (injection production). He is well-known as a father of plastic in last 40 years due to his long experience in injection mold making and producing injection plastic products.

Further, both parties have shown their green light to extent current contract for ten more years.

### Site visit

Baharestan does not have enough technical and polymeric knowledge to have site visit, however, this buyer is always welcome.

### Long-term contract

Baharestan is eager to extend the current 5-year (finishes 2015) contract to a 10-year (up to 2025).

### Technical assistance in improving suppliers’ parts and materials

Sometimes, a kind of material needs to be tested outside of laboratory condition and during producing process. In this regard, Baharestan provides the supplier’s engineers with its machineries, molds and human resource to test the material in its site.

It is rare but the experts of the supplier are served by Baharestan’s advice and experience to correct the chemical compounds or substances to reach better material.

### Expectation of Supplier’s certification

According to types of usage the respective certificate is submitted to all customers if available e.g. for those plastic products which are used in food or drug industry, customers are furnished with the FDA certificate.

### Intensive information sharing

Petrochemical Company shares some information in respect of international prices of all produced raw material and comparison with local prices, technical information of new raw material and new findings in polymer industry. Other information is too confidential to share even to the closest customer.

The buyer shares information in respect of export procedure or operation of material during production.

### Training and education of a supplier’s personnel

There were some training sessions for packaging e.g. the way of using pallets and wrapping the raw material bags.

### Exchange of personnel between the two firms

In the past, Petrochemical Company placed two verifiers in Baharestan’s site to check delivered material to use for Petrochemical Company’s pallet requirement without adding any other recycled material that influences the quality of pallets.

### Supplier involvement in the buyer’s NPD and development

Petrochemical Company provide the buyer with mold design suggestion (e.g. pipe flow lines or number of hot runners in mold) especially for auto components and weight of finished products for having acceptable strength based on the material types. These affects the cycle time, percentage of material used in each product and finally respective total production cost.

### Direct investment in a supplier by the buying firm

| Table 4.4: SD Practices from Petrochemical Company’s Perspective as the Supplier of Baharestan |
| Source: Own creation |

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4.2.2.2. Success Factors of Supplier Development from Petrochemical Company’s Perspective

Petrochemical Company is satisfied through the collaboration with Baharestan according to the positive effects which it has experienced in terms of better condition of packaging.

➢ Buyer-specific Success Factors

*Long-term strategic goals:* Petrochemical Company perceived Baharestan’s long-term plans associated with better performance of the company e.g. new design of packaging system for the raw material that is the plastic box pallet which is accepted and confirmed by the supplier. The respondent declares that both parties’ R&D departments are now involved in clarifying design and drawing of product and respective mold e.g. dimension, appearance, weight, raw material types etc. This demonstrates the tendency of long-term collaboration between two parties, increasing the performance of the Petrochemical Company as well as its customers’ satisfaction through good delivery condition.

*Top management support:* Top management of Baharestan shows their willingness to the relationship longevity. The buyer allocates its resource (financial and human) in order to invest as much as possible to improve Petrochemical Company’s packaging system to reduce the waste, cost and defected material.

*Power influence strategy in SD:* Petrochemical Company is dependent on Baharestan only based on required pallets; however “there are other manufacturers who tend to establish the same collaboration with us”. Although Petrochemical Company needs to consume more time and energy to establish stable relationship with new producers, “it is not impossible to shift” the sales officer adds.

*Buyer commitment:* Baharestan manifests its commitment to develop Petrochemical Company’s performance through its investment and willingness to prolong mutual agreement.
Supplier-specific Success Factors

Supplier’s expectations in its strategic objectives: Petrochemical Company did not have pre-set plan to use its customers’ power, knowledge and capabilities to improve its performance and/or capabilities. It might be because of the exclusive nature of the company which leads to be accepted by all local manufacturers. Collaboration with Baharestan facilitates an aspect of the continuous improvement strategies of the company.

Conformity of supplier’s capabilities: “We always attempt to meet our buyer’s requirements in terms of grades and specification of requested material” the respondent notices. In this regard, new and special HDPE material is produced to enable Baharestan to produce pallets for Petrochemical Company’s packaging purpose stronger and more tolerable compared to other polymeric material. Moreover, new material is produced for Baharestan which is used to manufacture plastic components for automotive industry.

Supplier’s commitment: According to Petrochemical Company’s viewpoint, the company is totally committed to its buyer through its commitment to the signed contract and makes the raw material compatible with finished product’s requirements.

Buyer-supplier Interface Success Factors

Knowledge sharing and transfer: On the one hand, Petrochemical Company transfers new issues of polymer industry as well as some technical data regarding the way of using material based on machineries and mold designs. For example, appropriate machineries adjustments, injection pressure level of machineries and temperature adjustment or written manual for special grades of material. Additionally, the company shares other manufacturers’ experience in terms of how to use some specific raw material in production procedure to achieve the optimum performance.

On the other hand, Baharestan provides Petrochemical Company with material problems and modification suggestions of raw material when it is tested in the production line. This makes the supplier to produce better raw material to meet the customers’ requirements. It should be noticed that the plastic pallets which are delivered for packaging purpose will have better quality and life-time as well.
**Trust:** According to the Petrochemical Company’s point of view, there is trust between both parties which can be regarded as eliminating the verifiers that both parties had in other’s site. However, governmental policies of the supplier do not allow sharing confidential information which is not related to trust issues between parties.

**Communication methods and effective communications:** Normally, both parties contact each other through fax, telephone successively. Moreover, Petrochemical Company finds the communication with Baharestan effective and two-way with consideration of its tall hierarchical structure.

**Long-term commitment:** Petrochemical Company limits itself the contract clauses associated with packaging system when strategically answers “*our commitment to the contract shows our willingness but who know about the future?*”

### 4.2.2.3. Barriers to Supplier Development from Petrochemical Company’s Perspective

- **Buyer-specific Barriers**

  **Lack of Buyer’s top management support:** Petrochemical Company is sure about top management’ supportive behavior of the buyer.

  **The buying firm’s credibility to its supplier:** Petrochemical Company perceives Baharestan’s sensitivity of quality through frequent receiving control quality reports. This strengthened by establishment of specialized quality laboratory in Baharestan’s site to have a random test of delivered material as well as researching on material chemical compounds or substances to increase the quality.

  **Bias-related Barriers:** Petrochemical Company’s volume of sales to buyers in this field is less than 5% of total sales. Therefore, it is not dependent to this or other customers since the company is one of the exclusive suppliers in the country and always is paid the maximum attention by its customers to keep and prolong business relationships.

  **The buying firm’s effectiveness:** The collaboration of Petrochemical Company with the buyer is effective enough to continue. Performance improvement i.e. delivery condition is resulted in increase of customers’ satisfaction. Additionally, Baharestan’s efforts
contribute to better material quality achievement (only in those material types that Baharestan has experience and knowledge).

**Misguided SD objectives:** In terms of performance improvement of Petrochemical Company, Baharestan always expresses its objectives clearly to the company, “*but it does not mean we must accept all*” the sales officer adds.

**The buyer’s reluctance to SD:** Petrochemical Company never realizes unwillingness from Baharestan’s side to be engaged in the present SD efforts.

- **Supplier-specific Barriers**

  **The supplier’s lack of commitment:** Petrochemical Company always keeps its promises and is committed to whatever is asked for. “*Sometimes, some problems in terms of convenient delivery time and quality occurs which is out of our hands*” the sales officer says. Due to the current sanctions and lack of government’s supports in terms of providing necessary raw material (special catalyst, special additives etc.) and equipment; the company faces deficiency (since last two years) compared to the cooperation history.

  **Insufficient supplier resource:** Petrochemical Company suffers from lack of new equipment and thus it could not achieve estimated production capacity. This affects the customers’ satisfaction associated with on-time delivery.

  **The supplier complacency:** Based on ISO 9001:2000, Petrochemical Company frequently asks its customers’ satisfaction and dissatisfaction.

  **The supplier’s reluctance to SD:** There is no aspect which the Petrochemical Company is not willing to engage in this relationship. The respondent continues “*what we say No is because of our limitation from the top*”.

- **Buyer-supplier Interface Barriers**

  **Lack of trust:** It is said that Trust exists between both parties.

  **Insufficient inducements to the supplier:** According to Petrochemical Company, the buyer doesn’t induce. In the words of the respondent “*it is not in our policy to accept incentives from our customers*”.
**Poor alignment of organizational cultures:** Petrochemical Company does not have any problem with this buyer in terms of organizational culture.

**Poor communication and feedback:** Petrochemical Company does not demonstrate any problem or difficulty in terms of two-way communication. However, two-way communication is influenced by “bureaucratic manner” of the organization when the respondent explains that “the information might not be transferred to the right person due to the same reason”.

**Power related issues:** Petrochemical Company finds itself more powerful to achieve interested terms in negotiation. This is because of exclusive nature of the company, no other competitors in the local market and sales volume of petrochemical Company to Baharestan (less than 1 %).

**Lack of profitability:** Petrochemical Company believes that this relationship is profitable for both and even more for the buyer. Through this collaboration, Baharestan’s molds and machineries are working which is an advantage for a manufacturer in the economic recessions of Iran.

**Risk of losses:** Petrochemical Company doesn’t face risk of losses.

### 4.3. Dyad II – Persian Sanat Baharestan Manufacturing Co., and Tederic Machinery Co., Ltd.

The second dyad is the collaborative relationship between Persian Sanat Baharestan Manufacturing Co., a manufacturer of plastic pallets and auto component; which is called Baharestan from now and its immediate key supplier; Tederic Machinery Co., Ltd., a supplier of injection machineries which is called Tederic from now on.

#### 4.3.1. Perspective of Baharestan as the Buyer of Tederic

The following information is based on the interview conducted 10-04-2013 with Mr. Seyed Javad Mirheidari, managing director as well as the owner of Baharestan in respect of the company’s perspective about the collaboration i.e. the SD program with this supplier- Tederic. The suppliers’ views about their relationships with this focal company are expressed subsequently in section 4.3.2.
4.3.1.1. The story of Supplier Development Practices from Baharestan’s Perspective

Baharestan began its business with Tederic exactly after foundation in 2008 although the owner (managing director) of Baharestan has known this supplier from Chinaplas exhibition 2006 which is one of the biggest Asian exhibitions in plastic and rubber industry. Baharestan’s owner had bought the injection machineries from European sources in the past to equip his former factories. However due to the competitive prices that Tederic provides compared with European competitors, Baharestan has started to deal with this Chinese supplier through placing trial order of three injection machineries in the first phase of its relationship.

After installation of machineries Baharestan was satisfied with technical quality. However, there were some technical difficulties in terms of quality compared with European machineries, matching the machineries with raw material and molds as well as electricity consumption etc.

Consequently, in 2009, a one-year contract was signed in order to purchase five new injection machineries which should be compatible with Baharestan’s technical requests. Furthermore, previous purchases had to be adjusted to optimize the production of plastic products to meet customers’ preferences. The respondent notes that “Baharestan needs to establish a close relationship with its machinery supplier as a partner in order to be in a safe side in terms of aftersales service and further modification of machineries”. Thus, it can achieve the maximum level of compatibility with molds and raw material.

In late 2009 and early 2010, this collaboration has changed its face. Due to geographical distance, timely on-site technical assistance and changes were hard to gain. Further, due to growing speed of plastic industry potentials as well as manufacturers’ needs in Iran, there was an opportunity to expand the mutual relationship. In this regard, three technical engineers and marketing manager of Tederic were invited to Iran through Baharestan’s responsibility for marketing and technical study purposes. After three months stay of Tederic’s personnel and negotiations, Chinese engineers recognized and applied requested modification on purchased machineries and both parties agreed to establish Tederic’s Middle East sales branch in Iran through Baharestan’s supports in
order to sell injection machineries matched with market’s technical requirements and enhance aftersales service and technical support.

During this time, Baharestan asked for new injection machinery- 4000 tons which is able to produce plastic finished product with weight of 55 Kg. Tederic have not designed such heavy machinery yet. After six month close technical information sharing through various trips to China and negotiation about using what kind of components, steel, motors etc., the design of this machinery was finished based on Baharestan’s technical expectation and European standards.

In early 2011, the new machinery passed initial tests and was delivered to Baharestan’s site which was the first heavy injection machines in Middle East as well as Iran that led Baharestan to be quite distinct from other plastic manufacturing companies in the region. The contract was extended to another five years to have more joint actions through promoting Tederic machineries in the local market.

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<td>Buying from alternative suppliers to provide competition for current suppliers (Competitive pressure)</td>
<td>In the past, Baharestan put Tederic into competitive condition through short-term contract as well as running bidding and threatening it by other suppliers’ prices.</td>
</tr>
<tr>
<td>Evaluation of supplier performance (Supplier evaluation)</td>
<td>Technical tests always are done while new machinery is under production process and relevant tests are applied before delivery.</td>
</tr>
<tr>
<td>Buying from a limited number of suppliers per purchased item</td>
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| Raising performance expectations                                             | Baharestan expects better delivery time and lead time, however pressure on the supplier might affect the quality, therefore “Baharestan has to accept and be patient”.  
Baharestan clearly expresses its expectations in terms of quality of component that Tederic uses in the machineries such as steel material, pump motor and electric motor and electric power types, etc. as well as technical requirements which directly affects molds functioning and the quality of finished products successively. |
| Communication and feedback                                                    | Baharestan’s employees as well as top management are in frequent contacts with Tederic main office and its agent in Iran through e-mail, fax, telephone and face-to-face meetings. Most meetings are now held with Tederic agent in Iran to share market information, sales strategies, technical problems and solution requests or modification based on market demands. |
| Knowledge Transfer                                                            | Technical information sharing is high between two parties, however due to Baharestan’s weakness in technical information; the company is most likely to transfer technical requests instead.  
Inviting the supplier technical engineers is the most frequent method for transferring the knowledge and now it is also conducted through frequent meetings with its agent personnel. |
| **Recognition** | Tederic is recognized by publishing its information in Association of Plastic Industry of Iran as well as inviting its top management in formal banquets that are held in plastic industries gatherings or Iranplast exhibition in order to make it known by other companies. All invitations and respective costs are applied by Baharestan’s responsibility. |
| **Promises of increased current and/or future business if supplier performance improves (Supplier incentives)** | Machinery is not a daily product thus it is not possible to promise of increase the purchase volume. A commitment to promise of purchasing all demanded machineries from Tederic is in Baharestan’s strategy. Additionally, due to reputation of Baharestan’s owner in plastic industries, he recommends Tederic’s products to all factories which contribute to increase of Tederic’s volume of sales. |
| **Site visit** | Baharestan has two separate site visits during producing a new machinery for itself or for another customer in Iran market to monitor the quality and technical specification of components as well as tests the production when the machinery is ready to dispatch. However, the site visits have been decreased due to common technical language and trust that have been achieved over time. |
| **Long-term contract** | Baharestan extended its 1-year contract to a 5-year (2011-2016) and hopes to expand the mutual collaboration more. |
| **Technical assistance in improving suppliers’ parts and materials** | Baharestan provides technical suggestions to improve components of Tederic and quality of machineries for Iran market. For instance, Baharestan requests to change electric panel in order to have low electricity consumption or changing the length of cylinder in order to improve material flow and thus increase the quality of finished product. |
| **Expectation of Supplier’s certification** | Baharestan requested Tederic to get CE standard certification which is European standard. Now Baharestan is working with Tederic to gain ample information and data in order to match its product with ISI (Iranian) standard. |
| **Intensive information sharing** | All technical information is shared with Tederic to “align both parties’ targets” and achieve long-term benefits. The financial information in respect of sales and prices are shared in order to get appropriate sales strategy in the market. |
| **Training and education of a supplier’s personnel** | Baharestan’s knowledge is not ample to train Tederic’s staff, however, through the experience that Baharestan has, some sort of know-how is transferred to the supplier’s. |
| **Exchange of personnel between the two firms** | Tederic sends its engineers temporarily to Baharestan’s site to train installation and operation of machineries as well as provides the manual instructions for each purchase. |
| **Supplier involvement in the buyer’s NPD and development** | In order to have a qualified plastic product, machineries, molds and raw material should work harmoniously otherwise it affects the quality negatively. Therefore, Tederic’s advice is mandatory in designing new products associated with designing new mold and respective raw material e.g. the weight and dimensions of the final product; injection point, hot runners and water flow regulators of mold etc. |

**Table 4.5**: SD Practices from Baharestan’ Perspective as the Buyer of Tederic  
**Source**: Own creation
4.3.1.2. Success Factors of Supplier Development from Baharestan’s Perspective

Baharestan declares that it is satisfied with Tederic’s performance and capabilities to some extent.

- **Buyer-specific Success Factors**

  **Long-term strategic goals:** The main goal of Baharestan in this SD program is to improve Tederic’s performance and capabilities in order to be close to European technology. Therefore, Baharestan itself can achieve its objectives that are focused on increase the production volume, providing new plastic products to the market (international or local) and completing the long-term development plan. For instance, Baharestan is now involved in NPD of polymer pipes for gas and oil industries as well as sewage pipes through collaboration with Tederic to be equipped with new machineries.

  **Top management support:** Top management of Baharestan has realized the benefits of close collaboration with Tederic thus, its agent in Iran is granted with the building of the office. Furthermore, Baharestan has 25 % share of Iran agent that demonstrated its willingness to the development efforts and longevity of the collaboration.

  **Power influence strategy in SD:** Baharestan influences Tederic through submitting relevant information, request associated with asking for performance increase especially in quality, promise of extending the contract and future purchase as well as making a recommendation to other prospects.

  **Buyer commitment:** Baharestan is committed to the SD efforts with Tederic through keeping its verbal and written promises such as future purchase, longevity of relationship, supportive behavior and considers Tederic as its partner as well as exclusive machinery supplier.

- **Supplier-specific Success Factors**

  **Supplier’s expectations in its strategic objectives:** Before establishing the SD program by Baharestan, Tederic had zero percent of Iran market share and now through this collaboration and efforts it has achieved to gain about 35 % of Iran market share which is considerable. Additionally, through improvement of its capabilities now Tederic is
able to produce heavy injection machineries such as 4000 tons which is demonstrated in its advertisements. This enables Tederic to enter to new markets e.g. Australia.

Conformity of supplier’s capabilities: Baharestan mentions that Tederic has invested considerable resources for adding or adjustment of its capabilities to meet Baharestan’s expectations and “this conformity has been done through Baharestan’s supports and shared information and experience”.

Supplier’s commitment: Unfortunately, the Iranian companies’ perspective is not optimistic enough about Chinese suppliers. It leads Iranian companies to have conservative behavior towards Chinese companies; however, Tederic always demonstrates its commitment to Baharestan’s investments and SD efforts through its attempts for capabilities and performance improvement as well as its loyalty and willingness to have a long-term partnership.

- Buyer-supplier Interface Success Factors

Knowledge sharing and transfer: As mentioned above, Baharestan is not in appropriate position to submit technical knowledge to produce high tech injection machineries because Baharestan is manufacturer of plastic products and thus it transfers its experience that gained over time in terms of what contributes to better production and what hinders the quality of finished products. For example, information regarding types of water, electricity in Iran and geographical and weather conditions contributes to utilizing appropriate components or parts in the machineries to gain maximum level of compatibility. In addition, as both parties are shareholders of Iran agent, Baharestan shared information in respect of market’s demands and preferences.

Consequently, above shared knowledge contributes to increase the know-how how to treat with machineries even by simple operator, market share increase and sales volume growth in Iran as well as other markets. Moreover, through transferring experience in plastic production process, Tederic has improved the quality of machineries that leads to produce qualified finished product and create value for Baharestan’s final customers.

Trust: According to Baharestan’s perspective, there is a mutual trust between two parties. It states that it is built up slowly from mutual experience over time. On the one hand, Baharestan’s trust in the supplier is because of Tederic’s commitments to
promises, honesty, full loyalty, openness in terms of cost production and requested financial information and continuous efforts of improvement. On the other hand, Tederic trusts Baharestan which is revealed through Baharestan’ openness in market information, transferring information of competitors activities, and providing Baharestan with flexible financial system due to current sanctions on Iranian banking system (payment due time is three months after delivery time (Bill of Lading time) up to USD 500,000).

**Communication methods and effective communications:** The communication methods are e-mail, fax and telephone successively. Face to face meetings with Tederic’s top management are conducted usually twice a year and engineers meetings are applied when new order is placed. Regular meetings (once a month) are held in Iran in order to negotiate about sales strategies and financial issues.

Baharestan finds the mutual communication is to-and-fro and states that “we never wait more than 48 hours to receive requested response from our Chinese partner”. However, there are still some difficulties associated with English language that misleads the accuracy of some information particularly technical data and information.

**Long-term commitment:** On the one hand, as all machineries in Baharestan’s site are furnished by Tederic, Tederic is considered as a key counterpart in all NPD or product development. Baharestan mentions that it aligns its future goals concerning long-term collaboration with this supplier. On the other hand, Tederic shows its long-term commitment through long-term investment in its machineries, equipment and human resource in order to be more adjusted with Iran’s market and Baharestan’s requirements. However, it should be noted that Baharestan had a lot of difficulties in order to get green light and persuade Tederic’s management for the investments initially.

**4.3.1.3. Barriers to Supplier Development from Baharestan’s Perspective**

Although Baharestan is satisfied with Tederic’s performance and capabilities, still Tederic needs to be improved in terms of quality.
Buyer-specific Barriers

Lack of Buyer’s top management support: Baharestan demonstrates its top management supportive behavior.

The buying firm’s credibility to its supplier: Baharestan’s emphasis on the quality of machineries is vividly through quick reaction in initial test in China, transferring in-depth and detailed reports of technical issues in respect of received machineries about all small problems without neglect and expressing its expectations of quick modification and replacement of deficient parts.

Bias-related Barriers: Baharestan is totally dependent to Tederic since all machineries were provided by this supplier. In addition, it commits to purchase future demands from Tederic due to the signed agreements. Thus, Baharestan pays considerable attention to this supplier in order to assure compatibility of machineries with molds and raw material as well as receiving on-time technical assistance and aftersales service.

The buying firm’s effectiveness: Tederic’s market share in Iran (37% in 2012) and its feedback to Baharestan based on its increased percentage of sales and entrance in new markets reveals the effectiveness of SD efforts and its capabilities and performance improvements.

Misguided SD objectives: According to Baharestan, all long-term plans of the SD program are expressed to Tederic. The company tries to clarify the SD objectives and persuade the supplier of quality-related issues and Iran market’s requirements.

The buyer’s reluctance to SD: Concentrating on sales issues in the local market is high demanding in terms of human resource, time and energy and is not attractive for Baharestan due to the nature of the company which is producer. Baharestan is well-known as a big producer of plastic products and thus, its preference is to spend its resource more on NPD and qualified products in order to achieve its customers’ satisfaction.

Supplier-specific Barriers

The supplier’s lack of commitment: Baharestan states that the supplier is committed to its promises and agreements.
Insufficient supplier resource: In the past, deficiency of Tederic’s capabilities—equipment and machineries was considerable and the efforts of the supplier to improve its capabilities and performance are visible over relationship progress. However, still Baharestan complains about quality gaps compared with European competitors.

The supplier complacency: Tederic receives frequent evaluation reports from Baharestan in which Baharestan expresses its dissatisfaction and satisfaction. However, Baharestan is rarely asked for feedback.

The supplier’s reluctance to SD: Baharestan does not mention any items.

➢ Buyer-supplier Interface Barriers

Lack of trust: According to Baharestan trust exists in the relationship.

Insufficient inducements to the supplier: Baharestan believes that Tederic can perceive the buyer’s incentives which are applied based on Tederic’s improvement in capabilities and/or performance. It can be regarded as determining Tederic as the exclusive supplier of injection machineries for Baharestan, recommendation and finally supportive behavior of Baharestan in the local market.

Poor alignment of organizational cultures: Baharestan does not have any problem with the supplier in terms of organizational culture.

Poor communication and feedback: English language as a second language causes misunderstanding in shared technical information and expectations. Baharestan regards this as the main problem in the mutual communication. The effective and accurate communication might be hindered and so on-time reactions are damaged.

Power related issues: In negotiation, Baharestan regards itself more powerful in achieving favorable terms not because Baharestan is bigger or smaller than Tederic—size matter, but because Baharestan is the customer of Tederic and “the customer is always right!”

Furthermore, Baharestan’s purchase volume is 100 % from Tederic but it does not mean large sales volume of Tederic. It is interesting to note that Tederic’s sales volume does not matter in SD program run by Baharestan since the type of machineries that the company orders i.e. heavy machineries is resulted in considerable turnover in the
supplier as well as improvement of the its capabilities and performance while small machineries orders might not have the same effect.

**Lack of profitability:** Baharestan mentions this SD program is profitable for both parties. Baharestan gets benefits of competitive price with acceptable quality. Baharestan states that “if we had bought the same machineries from Europe, Baharestan would have not received any kind of aftersales service due to the current economic sanctions”. Tederic has achieved considerable improvement in its capabilities that contributes to gain competitive advantage in new markets and long-term benefits.

**Risk of losses:** Baharestan has realized some risks of losses in its investments, since its relationship with other suppliers (local or international) is far now and if Tederic faces any problem e.g. bankruptcy, Baharestan will lose considerable benefits and face switching cost to another supplier, cost of readjustment between machineries, molds and raw material etc.

4.3.2. **Perspective of Tederic as the Supplier of Baharestan**

The following information is based on the interview conducted 15-04-2013 with Mr. Shahrouz Marashi, sales manager of Tederic Iran agent who has been working in this firm about 3 years. The sales manager of main office in China was not available to interview; therefore, it is decided to ask Tederic’s perspective about the collaboration with the focal company-Baharestan from its agent in Iran. The company is called Tederic from now on in the below sections.

4.3.2.1. **The story of Supplier Development Practices from Tederic’s Perspective**

Tederic started its business relationship officially with Baharestan in 2008 through receiving 3 injection machineries order. The initial relationship was some sort of basic sale and purchase relationship. After receiving the machineries on Baharestan’s site, it has submitted the quality control evaluation reports in which stated that delivered machineries was in some sort of satisfactory level specially due to the competitive price however; there was a complaint about quality deficiency as well as quality gaps compared with Tederic’s European competitors.
In 2006, top management of Tederic declared the expansion strategies into new markets. Thus, knowing Baharestan and its owner reputation in plastic industries of Iran was a potential to enter Middle East market. This territory is highly demanding of injection machineries due to availability of oil, petrochemical and polymer industries and thus many plastic manufacturers. In order to achieve this goal and improve established relationship with Baharestan, Tederic needed to meet this customer’s demands and expectations in terms of quality and technical modification in components of machineries. The modification was mandatory for Baharestan production process since injection producers in Iran are provided by HDPE material by Iranian petrochemical companies. However, Tederic machineries were designed for PP (Poly Propylene) material usage. It should be noted that the preference of manufactures in Iran is using HDPE rather than PP material due to its availability and cheaper price compared to PP (about 30% less).

Based on Tederic promises to improve the quality and requested adjustments of injection machineries for future purchase as well as complete technical modification of previous delivered ones, a one-year contract was signed with Baharestan in 2009. These changes were highly demanding in terms of new investment in equipment, components (barrels, cylinders, types of screws, material flow units etc.) to match machineries with HDPE material.

In 2010, Tederic’s personnel were invited to Iran to apply on-site requested modifications as well as the market study which resulted in establishment of Tederic’s agent in Iran through Baharestan’s cooperation. Lack of necessary equipment and machineries was the biggest challenge for Tederic when it was asked to design and produce new heavy injection machinery-4000 tons. Therefore, through Baharestan’s support, knowledge and experience sharing, Tederic has started to improve respective capabilities to meet this requirement.

In 2011, Tederic fulfilled to deliver the new machinery in an appropriate condition to Baharestan’s site and contributed to signing a 5-year contract (finishes 2016). New capabilities of Tederic enable it to enter to Iran market and achieve competitive advantage consequently. Furthermore, Iran agent of Tederic and on-site aftersales
service are another competitive edge compared with European competitors in Iran due to current sanctions on Iran.

<table>
<thead>
<tr>
<th>SD Practices</th>
<th>Explanations of the SD Practices</th>
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<tr>
<td>Buying from alternative suppliers to provide competition for current suppliers (Competitive pressure)</td>
<td>In the beginning of relationship with Baharestan, Tederic was under competitive pressure of other European and Korean competitors through acknowledgement of biddings. Heavy machineries which are the focus of Baharestan are not bought by all manufacturers and thus competitive atmosphere for these types of machineries is always tight.</td>
</tr>
<tr>
<td>Evaluation of supplier performance (Supplier evaluation)</td>
<td>Tederic has followed Chinese and American methods for quality which was different from Baharestan’s requests- European standards. Tederic is evaluated and receives evaluation reports for used components through different quality tests before delivery.</td>
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<tr>
<td>Buying from a limited number of suppliers per purchased item</td>
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<tr>
<td>Raising performance expectations</td>
<td>Tederic receives requests of shorter lead and delivery time but it is not always feasible due to complicated procedure of machineries production. “Shortening of lead time harms the quality of machineries”. Baharestan is strict about technical and quality issues and thus Tederic is always trying to be close to requested expectations. Tederic claims “now we might be 5% far from Baharestan’s expectations”.</td>
</tr>
<tr>
<td>Communication and feedback</td>
<td>Tederic’s personnel contact Baharestan’s frequently and it is done through Tederic’s sales department (e-mail, fax, telephone and face-to-face contacts). Top management meetings are held in Iran or China twice a year in normal situations. The meetings regarding Iran sales are held in Tederic agent in Iran for marketing and sales purpose and respective reports are submitted to Chinese office after each meeting.</td>
</tr>
<tr>
<td>Knowledge Transfer</td>
<td>Baharestan submits its suggestions, advice and expectations in respect of quality and technical issues of parts and components; however, technical information sharing is usually applied from Tederic’s side due to its technical expertise. “Baharestan needs to see the results in the production” Tederic’s respondent said. To understand Baharestan’s expectations, Tederic’s technical engineers are usually invited to Iran for having on-site discussion.</td>
</tr>
<tr>
<td>Recognition</td>
<td>Tederic is introduced to other manufacturers by Baharestan through special introduction meetings, inviting Tederic to Iranplast exhibition (each 2-year) and publishing Tederic’s name and information in the Association of Plastic Industry Magazine. This magazine is the most well-known magazine in plastic industries in Iran with more than 1000 companies’ membership.</td>
</tr>
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</table>
Promises of increased current and/or future business if supplier’s performance improves (Supplier incentives)

One of Baharestan’s promises is supporting Tederic to enter Iran market and achieve volume of sales in this market based on improvement in Tederic’s capabilities and performance. Additionally, Baharestan assures Tederic to buy all demandedmachineries in future if the capabilities or/and performance improves. Moreover, other manufacturers are persuaded to buy Tederic’s machineries through influence of Baharestan’s owner and his power in Iran plastic industries.

Site visit

Detailed inspection regarding types and kinds of part and components used in the machineries (before assembling) were done in the past in Tederic’s factory. Recently, Tederic is inspected by site-visit of Baharestan in terms of initial testing of machineries to check the quality and technical specification before delivery.

Long-term contract

1-year contract was extended to a 5-year.

Technical assistance in improving suppliers’ parts and materials

During Baharestan’s engineers visiting, Tederic receives technical suggestions to improve or change components and parts to achieve maximum compatibility with material as well as molds. For instance, Baharestan requests to change parallel screws with conical types in order to increase the strength of finished products.

Expectation of Supplier’s certification

Although Tederic had technical standards certifications, it got CE standard certification according to Baharestan’s request. Now Tederic is involved in procedure to get ISI (Iranian) standard.

Intensive information sharing

On the one hand, Tederic is asked to share information in terms of production process information, production cost, components and parts cost in order to offer competitive price to Iranian customers. On the other hand, Baharestan submits all marketing information such as competitors’ prices, current biddings information, new laws and decisions in Iran plastic industry and custom regulations etc. without hesitation.

Training and education of a supplier’s personnel

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Exchange of personnel between the two firms

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Supplier involvement in the buyer’s NPD and development

In plastic industry, compatibility between machineries, molds and raw material is an integral part of production, therefore, Tederic’s involvement in NPD process plays vital role to achieve competitive advantage. Tederic should monitor process of mold making and designing of new product in terms of dimensions and weight etc. in order to assure the respective compatibility with machineries.

Direct investment in a supplier by the buying firm

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**Table 4.6: SD Practices from Tederic’ Perspective as the Supplier of Baharestan**

**Source:** Own creation
4.3.2.2. Success Factors of Supplier Development from Tederic’s Perspective

Tederic is totally satisfied with this SD program. Baharestan’s requests for changing some parts or components in machineries requires a lot of energy and time to apply otherwise the parts will not work together properly. Tederic needs to invest considerably in R&D and production departments to replace the requested parts without losing consistency among different parts of the machinery. However, Tederic states “all these costs are worth to pay in order to increase our sales volume and benefits through Iran markets”.

➢ Buyer-specific Success Factors

*Long-term strategic goals:* The long-term strategic objectives of Baharestan are continues improvement in its production as well as presenting new products to the markets according Tederic’s perception. This cannot be gained without Tederic’s improvement in its capabilities and/or performance; hence, its efforts through this SD program are archiving long-term competitive advantages for both parties. It can be verified by its emphasis on Tederic’s improvement and involvement in Baharestan’s NPD.

*Top management support:* According to Tederic’s point of view, Baharestan’s top management is aware of pros and cons of this SD program. Through its willingness and seriousness to continue business relationship with Tederic, allocating resources to the SD efforts such as paying cost of Tederic’s personnel traveling, advertisement and exhibitions; allocating the building and show room space for Iran agent are signs of top management’s supports.

*Power influence strategy in SD:* Tederic states “let’s not name influence on Tederic but the willingness that Tederic has to answer Baharestan’s requests”. Tederic tries to be compatible as much as possible to Baharestan’s expectations in terms of quality and technical specification in order to commit to the SD program.

*Buyer commitment:* Baharestan is committed to the SD program through its efforts for Tederic’s improvement by sharing key information of the market, investment in Tederic agent in Iran, enthusiasm to prolong the relationship etc. The difficulty that both parties are faced with is decrease of sales volume since last year. It cannot be regarded as the
lack of Baharestan’s commitments. It is due to current economic sanctions and sudden devaluation of Iran currency, thus it might not be economic for Baharestan or other Iranian customers to invest in machineries now.

➢ **Supplier-specific Success Factors**

**Supplier’s expectations in its strategic objectives:** Due to labor costs in China, many international companies seek an opportunity to outsource their production, therefore, Tederic always looks for hunting this potential in order to improve its capabilities in return. Tederic had initially experience SD through investment that was made by one European auto manufacturer that contributed to capabilities improvement in Tederic. The SD program that Tederic is involved in by Baharestan is an opportunity to recognize Middle East market’s expectations and demands through Iran market’s experience and thus, facilitates the entrance to new territories.

**Conformity of supplier’s capabilities:** “Chinese products are famous for its competitive price globally; therefore, our products are attractive for manufacturers but quality should be borne in mind” the sales manager said. Tederic has invested in new machineries and equipment, switched to new reliable suppliers, expanded the factory’s space, learned laws, terms and conditions of Iran custom office to prevent discrepancy in commercial documents to align own capabilities and knowledge to Baharestan’s requirements.

**Supplier’s commitment:** Tederic points out that the growing progress of relationship between Tederic and Baharestan is a sign of Tederic’s loyalty and commitment to its promises and partnership.

➢ **Buyer-supplier Interface Success Factors**

**Knowledge sharing and transfer:** Baharestan needs that kind of technical know-how which contributes to better functioning of machineries thus Tederic always furnish its customers with written instructions and manuals in terms of installation, operation and maintaining the machineries. Even Tederic has spent a lot of energy to translate all technical information and data for better performance, of course it has been fulfilled through Baharestan’ skillful personnel assistance. Therefore, it can be expected better
life time of machineries, cycle time reduction and improvement in finished product’s quality etc.

Additionally, sharing the experience that Tederic has gained in its ten-year engagement in machinery industry in terms of other manufactures experience, technical know-how of operations leads Baharestan to handle small or even big problems during production process, use the machineries in a proper way and maximize the their capacity in production.

In return, the feedback that Tederic receives based on shared information increases its experience and knowledge to improve the quality of machineries.

**Trust:** Tederic emphasizes on mutual trust between two parties. Tederic shows its trust to Baharestan through its openness in shared information, loyalty and flexibility in financial issues and is sure Baharestan never uses them opportunistically. Joint action between parties, truthfulness, sharing market and competitors’ activities information and high communications volume demonstrate Baharestan’s trust.

**Communication methods and effective communications:** The communication methods are e-mail, fax and telephone successively. Face to face meetings with Baharestan’s top management (usually twice a year) are held in China or Iran. Engineers meetings are in an ad hoc manner according to new order discussion or occurrence of a critical situation. Iran agent and Baharestan sales department are in frequent contact to discuss about sales and financial issues.

According to Tederic, the communication is usually to-and-fro and effective. However, accuracy and timeliness of two-way communications are hindered due to recent economic or politic fluctuations in Iran that “Tederic cannot blame Baharestan”.

**Long-term commitment:** Tederic states that both parties have the long-term overview of the current collaboration. Both consider each as a partner rather than the simple customer or the supplier. The long-term commitment can be regarded as both respects for agreements and promises seen in the relationship history. The friendship that has been build up between two owners contributes to long-term partnership as well as spread reliable and friendly personnel relationships.
4.3.2.3. Barriers to Supplier Development from Tederic’s Perspective

➢ Buyer-specific Barriers

Lack of Buyer’s top management support: There is the support of Baharestan’s top management.

The buying firm’s credibility to its supplier: Tederic receives some unexpected changes in ordered machinery which is not easy to apply. For example, the initial order was for 2200 ton machinery which is able to produce the product up 16 Kg. During the production process the order had been changed to increase the weight of finished product to 18 Kg. Tederic bore considerable costs to change many parts such as screws, cylinders, barrel etc. to meet new requirement. However, according to Baharestan this change in type of machinery was due to change in its final customer’s order.

Bias-related Barriers: Regarding dependency to Baharestan, Tederic mentions “Baharestan is one of our Royal customers, however without Baharestan we will not die!” Tederic always tries to satisfy Baharestan’s requirements and attempts to strengthen relationship continuity in order to achieve long-term benefits.

The buying firm’s effectiveness: Baharestan’s SD program is valuable experience for Tederic. “This customer taught us how to develop the capability and performance through the customers’ relationship and support”. It opens a new door for Tederic to be introduces in the international markets stronger with wide abilities to provide heavy machineries with appropriate quality. Experiences that Tederic’s engineers have gained through producing heavy machineries recognized Tederic’s brand in the local markets as well as the international markets, Tederic now has considerable competitive advantage in front of its competitors “now we can say we did; not we may do!”

Misguided SD objectives: The long-term plans that Baharestan has with this SD program are explained to Tederic although some parts cannot be realized in-depth such as too sensitivity of quality. However, Tederic respects them in order not to ruin the partnership and miss the potential market of Iran.

The buyer’s reluctance to SD: No reluctance in the SD perceived.
Supplier-specific Barriers

The supplier’s lack of commitment: Tederic notices that it is fully committed to the SD program, Baharestan’s demands and mutual agreements (verbal or written).

Insufficient supplier resource: According to current requirements and expectation of Baharestan, Tederic is well-equipped. However, the buyer’s future expectations cannot be reached completely e.g. heavier or more complicated machineries.

The supplier complacency: Tederic strongly believes in Baharestan’s satisfaction with its capabilities and performance. The respondent demonstrates that “the company does not receive any main negative feedback during last two years from Baharestan”.

The supplier’s reluctance to SD: Ongoing and high investment in Tederic’s capabilities i.e. more advanced machineries and equipment is the aspect that Tederic is reluctant to involve in. Heavy machineries are not ordered by each manufacturer in one industry due to different reasons; lack of space, financial resource, ability etc. Therefore, the numbers of customers who are interested in this type of machineries are considerably fewer than small types. Tederic prefers to improve its capabilities for those equipment and facilities that have more customers.

Buyer-supplier Interface Barriers

Lack of trust: According to Tederic trust exists in the relationship.

Insufficient inducements to the supplier: Baharestan always recommends Tederic’s products to other producers in the industry and the sales volume of Tederic in Iran motivates for future improvements according the resource allocation and the company’s strategies and objectives.

Poor alignment of organizational cultures: Tederic does not have any problem with the buyer in terms of organizational culture.

Poor communication and feedback: The communication between Tederic and this customer is open and clear to some extent. However, one of the difficulties that Tederic has is unwillingness of Iranian people to work hard compared with Chinese when the respondent states that “we never go home if there is one non-answered letter on the desk!” as well as long and frequent holidays that Iran has. Such deficiencies affect
timely communication and feedback. Another problem is language that leads to some misunderstanding in technical interpretation. There are some technical expressions in machineries production that Baharestan’s personnel do not have ample knowledge to share and transfer their desires to make Tederic’s personnel understand.

**Power related issues**: In negotiation, Baharestan usually achieves more desired items than Tederic due to its bargain power as a customer.

Volume of sales is not matter in machineries industry and special business that Tederic has with Baharestan in terms of heavy injection machineries, since the price of heavy machineries is many times more than the price of small ones e.g. the price of 4000 tons machinery is 800 times more than 400 tons therefore, Tederic looks at its turnover growth as well as export increase.

**Lack of profitability**: Tederic affirms that the SD program is profitable for both companies. On the one hand, Baharestan increases the finished products’ quality and consequently creates and delivers value to the final customers. On the other hand, Tederic increases its sales, enters to new markets and be well-experienced to produce new and heavy machineries.

**Risk of losses**: Tederic is threatened to lose its business or export license through close relationship with Baharestan due to current economic sanctions on Iran. In this regard, economic sanctions might be imposed on Tederic by western countries, if the volume of sales and exports to Iran increase more than limited level.

4.4. Dyad III – Razak Chemie Manufacturing Co. & Sazeh Gostar Peyman Co.,

The third dyad is the collaborative relationship between Razak Chemie Manufacturing Co., a manufacturer of plastic mobile waste containers; which is called Razak from now on and its immediate key supplier; Sazeh Gostar Peyman Co., a supplier of rubber wheels and castes which is called Peyman from now on.

4.4.1. Perspective of Razak as the Buyer of Peyman

The respondent in this interview (15-04-2013) on behalf of Razak as a supplier of Baharestan is the managing director as well as the owner of the company. He is asked in
respect of the company’s perspective about the collaboration i.e. the SD efforts with its supplier- Peyman.

4.4.1.1. The story of Supplier Development Practices from Razak’s Perspective

The company started its business with Peyman from 2005 through simple and basic customer-supplier relationship. Peyman was one of five Razak’s providers of wheels, shafts and casters for plastic mobile waste containers (about 30% of total demands).

According to the growth of Razak’s market share and sales volume since 2006; those suppliers could not respond to demanded quantity and thus delivery times to final customers had serious delays resulted in paying penalty. Razak’s expectations and requested had increased through promises, request, threatening and encouragements but “there was a huge gap between the offer and the supply”.

In 2007, Razak started to investigate the economic justification in order to produce the same products in its factory. It has considerable costs and investment in machineries and human resource etc. thus, it was decided to run SD program with one of the present suppliers and thus came to agreement with Peyman. Through some investments in Peyman’s capabilities it has to sell the requested products 20 % less than the market price for five years. Additionally Peyman does not have the permission to sell the same product to any other customer in Iran. In late 2008, the first lot of products through new investments and improvements has started to deliver to Razak’s.

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<tr>
<th>SD Practices</th>
<th>Explanations of the SD Practices</th>
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<tr>
<td>Buying from alternative suppliers to provide competition for current suppliers (Competitive pressure)</td>
<td>Peyman provides 80% of Razak’s demands. Peyman is still informed about current biddings and other supplier’s prices.</td>
</tr>
<tr>
<td>Evaluation of supplier performance (Supplier evaluation)</td>
<td>Quality test is applied during production to check the quality of used material. Quality standards according to EN-840-5 as well as random testing of delivered goods in terms of quantity and quality are always applied.</td>
</tr>
<tr>
<td>Buying from a limited number of suppliers per purchased item</td>
<td>Razak has four more suppliers (2 Chinese and 2 local).</td>
</tr>
<tr>
<td>Raising performance expectations</td>
<td>Razak expects high quality products used virgin rubber material and according to quality standards, on-time and flexible deliveries according to the schedules. From 2009 number of defected items is decreased. The delivered goods conform to witness sample about 80%.</td>
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</tbody>
</table>
**Communication and feedback**
Razak warehouse’s employees as well as top management are in frequent contact with Peyman through fax, face-to-face discussions and phone successively. Razak submits written reports of each delivery (three times a week) to Peyman as well as the feedback of evaluation.

**Knowledge Transfer**
Technical information, new subjects about material and standards are shared through some kind of written reports or meetings. Both parties’ engineers are invited to have on-site consultation and exchange technical knowledge to attain better quality. Each party’s personnel are expert and skilled in their filed but “one’s weakness might be another’s strength!”

**Recognition**
Razak invites all Peyman’s personnel twice a year to have a friendly launch and have a site visit of Razak in order to know how their products are used on waste containers. According to Peyman’s recommendation those hard workers are given gifts by Razak in order to motivate others.

**Promises of increased current and/or future business if supplier performance improves (Supplier incentives)**
Razak promises to be supplied by Peyman 100%, if this supplier is committed to requested quality and increase production capacity simultaneously.

**Site visit**
Razak has frequent site visit and inspection in terms of testing the quality, material and procedure.

**Long-term contract**
A 5-year contract (2008-2013) which is likely to extent for another 5 years.

**Technical assistance in improving suppliers’ parts and materials**
Razak designed the mold of plastic rim of casters for Peyman. Due to Razak’s nature as a producer of plastic products, technical advice in respect of plastic and rubber fields submits to Peyman to improve the quality of products.

**Expectation of Supplier’s certification**
Razak forced and supported Peyman to get EN-840-5 standard certification.

**Intensive information sharing**
The financial information in respect of sales, cost production, components’ prices are asked in order to calculate the sales price and verify the reliability of Peyman’s own suppliers.

**Training and education of a supplier’s personnel**

**Exchange of personnel between the two firms**
Razak has its quality officer in Peyman in order to check the production process as well as the quality of material, components and finished products.

**Supplier involvement in the buyer’s NPD and development**

**Direct investment in a supplier by the buying firm**
Razak purchased required machineries, tools and equipment for Peyman as well as providing this supplier with new factory site and warehouse near Razak’s site. Moreover, some sorts of material (rubber, shafts etc.) are provided to Peyman by Razak.

| Table 4.7: SD Practices from Razak’ Perspective as the Buyer of Peyman |
| Source: Own creation |
| 109 |
4.4.1.2. Success Factors of Supplier Development from Razak’s Perspective

In general Razak is satisfied with this supplier’s performance through the SD program however, the respondent stats that “Peyman can do more”.

➤ Buyer-specific Success Factors

Long-term strategic goals: Razak’s long-term goals for this SD program are Peyman’s flexible delivery, capabilities improvement, high quality products and cost reduction in order to answer to the requirements effectively. This contributes to have satisfactory final products and delivery superior value to the final customers.

Top management support: Although casters and wheels are less than 10 % of Razak’s demands, this type of products is one of the main component of the final products (mobile waste containers). Top management’s support for this SD program can be shown through the investments in Peyman’s.

Power influence strategy in SD: Razak influences Peyman on many aspects. According to Razak, it affects Peyman’s performance and capabilities through information exchange (quality instructions), promises (purchase exclusively), threat (taking all machineries out, not extending the contract and switching to other suppliers) and legalistic pleas (contract).

Buyer commitment: Razak is committed to the SD efforts through its commitments to the contract, allocating resources to Peyman and the increase of purchase from this supplier.

➤ Supplier-specific Success Factors

Supplier’s expectations in its strategic objectives: Before establishing the SD program, Peyman was a very small producer. The products did not have quality standards. Through Razak’s efforts now Peyman is one of the well-known suppliers of casters and wheels in Iran. 50% of supplied products are assembled to the final products to export which demonstrates its growth in local and international market by improving its capabilities and performance.
Conformity of supplier’s capabilities: According to Razak’s explanations, Peyman has had different activities to adjust its capabilities and abilities to Razak’s requirements. It has hired new engineers and personnel, invested in small machineries and had learning sessions to operate with new machineries and equipment, had knowledge improvement in order to be granted the quality standard certificates. One the other hand, Razak support abovementioned alignment by investing in its capabilities e.g. providing new machines, tools and equipment, renting new site and warehouse, providing this supplier with necessary information and booklet to get EN840-5 standard etc.

Supplier’s commitment: Peyman is committed to the SD program to partially. There is a risk that the supplier may allocate the buyer’s resource e.g. delivered material to other customers’ orders opportunistically or gives the priority to others. Through strict clauses of the contract, observation and verifiers, Razak tries to place itself in a safe side to prevent any further problem.

➢ Buyer-supplier Interface Success Factors

Knowledge sharing and transfer: The shared know-how with this supplier is mainly focused on quality standards. In this regards, Razak prepares all information, requirements and new issues of EN-840-5 to lead this supplier to have the maximum conformity with the standard instructions. Furthermore, Razak’s 25-year experience of producing mobile waste containers is shared with Peyman to produce high quality products.

This knowledge sharing contributes to better quality of products for both. On the one hand, Peyman is able to improve its performance in terms of quality and quantity as well as capabilities development to increase production capacity. On the other hand, Razak receives satisfactory products consequently.

Trust: Regarding trust, Razak responds that “trust is good but control is better!” Razak controls mutual business relationship not to use the shared information opportunistically.

Communication methods and effective communications: The communication methods are fax, face-to-face meetings and telephones successively. The communication is basically from Razak since this supplier is not well-organized in communication. The
difficulty that Razak is faced with can be regarded as considerable delays in receiving answers and feedback especially in terms of quality correction. According to Razak, this supplier suffers from deficient administrative structure.

**Long-term commitment:** Razak seeks a long-term cooperation with Peyman through building up the maximum level of trust. All invested resource is demonstrated Razak’s commitments and the willingness for a long-term relationship. The respondent mentions that “we hope it is the same from Peyman’s side”.

### 4.4.1.3. Barriers to Supplier Development from Razak’s Perspective

- **Buyer-specific Barriers**

  **Lack of Buyer’s top management support:** Razak’s top management fully supports the SD efforts.

  **The buying firm’s credibility to its supplier:** Razak express its expectations of quality through the seriousness in its attempts to make the products conform to EN840-5 standard, different quality tests before and after dispatch, returning the defected goods and frequent evaluation feedbacks and reports. If Razak is supplied from other suppliers, it is because of the shortage in Peyman.

  **Bias-related Barriers:** Razak purchases 80% of its demands and based on its direct investments, Peyman is paid considerable attention without concerning its size compared to Razak’s in order to achieve improvement in the supplier’s capabilities and performances.

  **The buying firm’s effectiveness:** Peyman’s growth in terms of sales volume, quality, and production capacity is the visible sign of the effectiveness of the SD program.

  **Misguided SD objectives:** According to Razak, long-term plans are expressed clearly; however, Peyman’s perception is not satisfactory. The buyer’s objectives are interpreted as too much sensitivity that is not needed. Peyman cannot realize importance of quality issue in exports.

  **The buyer’s reluctance to SD:** Due to the different strategic objectives between parties, Peyman does not show more enthusiasm. “Peyman’s wishes came true” and thus it is
time and energy consuming for Razak to convince this supplier to be committed more to quality and promises which hinders the willingness of more involvements.

➢ Supplier-specific Barriers

**The supplier’s lack of commitment:** The risk of disloyalty is always felt from this supplier. The production capacity is occupied to some extent for other types of wheels or caster that Peyman receives from other customers or Peyman’s delays in answers and not paying enough attention to quality can be regarded as its low commitment according to Razak’s point of view.

**Insufficient supplier resource:** “Peyman is not an ideal supplier for us!” Razak states when it is asked about the supplier resource. Compared with other local suppliers, this supplier could meet requirements in terms of price, quality and delivery times.

**The supplier complacency:** Peyman is transferred frequent evaluation reports in which Razak express its dissatisfaction and satisfaction of each delivery. This is always originated from Razak’s side not vice versa.

**The supplier's reluctance to SD:** As mentioned before, Peyman has achieved its objectives and targets thus; this supplier does not tend to spend more energy and resources to improve more. “Peyman is waiting for our supports and investments”.

➢ Buyer-supplier Interface Barriers

**Lack of trust:** Razak fears that the supplier will shift to other competitors in the SC and thus will lose its competitive advantage.

**Insufficient inducements to the supplier:** Razak always tries to encourage the supplier through promises, investments and high volume of purchase even in the economic recession’s periods in Iran when orders are decreased to make Peyman understand “we are standing beside you!”

**Poor alignment of organizational cultures:** Razak does not have any problem with the supplier in terms of organizational culture.

**Poor communication and feedback:** In mutual communication Razak found non-organized structure, lack of ample capacity i.e. right personnel to realize the transferred
information as the difficulties to have an effective, on-time and accurate communication.

**Power related issues:** In terms of negotiation, Razak mentions it is likely to win the business discussions due to its advantages compared to Peyman i.e. its size, having large percentage of the supplier’s sales volume and owing the financial ability.

**Lack of profitability:** Razak believes in benefits of this SD program for both. It usually receives the goods on-time and ample products according to EN standard. Peyman has improved its production capabilities and thus its benefits increase through large sales volume.

**Risk of losses:** Razak fears of losses if the relationship will be damaged or ended unexpectedly. Razak is vulnerable of economic and competitive advantage losses in terms of its investment, shared technical knowledge and supplier’s replacement and respective switching costs.

### 4.4.2. Perspective of Peyman as the Supplier of Razak

The respondent in this interview (17-04-2013) on behalf of Sazeh Gostar Peyman Co., as a supplier of Razak is Mr. Abbas Khodaverdian who is the managing director as well as the owner of this firm. For the purpose of this research the respondent is asked for the perspective of the company as the supplying firm about the collaboration with Baharestan i.e. buying firm and respectively about the SD efforts.

#### 4.4.2.1. The story of Supplier Development Practices from Peyman’s Perspective

Peyman has supplied different types of rubber wheels, casters and metal shafts to Razak from 2005. After two-year simple collaboration Razak offered new cooperative relationship in order to improve the quality and quantity of the products. Due to the lack of ample financial resource Peyman could not meet requirements of Razak; hence, the buyer took the responsibility of some machines, tools and equipment investments which enabled Peyman to fulfill asked criteria.

Peyman is asked to get EN standards for the production based on Razak’s support and instructions which was a potential opportunity to represent Peyman’s brand in the market, increase the quality of products and thus the sales volume. In 2008, a five-year
contract was signed to produce specific type of wheels and casters exclusively for Razak with 20% less than the market price.

<table>
<thead>
<tr>
<th>SD Practices</th>
<th>Explanations of the SD Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buying from alternative suppliers to provide competition for current suppliers (Competitive pressure)</td>
<td>Peyman is put in a competitive atmosphere through biddings and alternative suppliers (local and international).</td>
</tr>
<tr>
<td>Evaluation of supplier performance (Supplier evaluation)</td>
<td>All products are tested according to EN 840-5 standard twice before and after each delivery through random testing and based on witness sample. Since some raw material (metal and rubber) is provided by Razak, it tests the material of product too.</td>
</tr>
<tr>
<td>Buying from a limited number of suppliers per purchased item</td>
<td>Peyman is sure about alternative suppliers but does not know how many.</td>
</tr>
<tr>
<td>Raising performance expectations</td>
<td>Better quality, increase the production capacity and delivery improvement are asked by the buyer.</td>
</tr>
<tr>
<td>Communication and feedback</td>
<td>Peyman contacts with Razak through telephone, face-to-face or fax frequently in terms of receiving orders and feedback of evaluations.</td>
</tr>
<tr>
<td>Knowledge Transfer</td>
<td>Both parties transfer some sort of knowledge in terms of technical data of production process, material types and machineries functioning. It is done through meetings or on-site consultation.</td>
</tr>
<tr>
<td>Recognition</td>
<td>Despite Peyman’s previous expectation before start this SD program, the buyer hides Peyman.</td>
</tr>
<tr>
<td>Promises of increased current and/or future business if supplier performance improves (Supplier incentives)</td>
<td>Razak is committed to its promises (increase purchases, investments, etc.) during the collaboration.</td>
</tr>
<tr>
<td>Site visit</td>
<td>Peyman receives frequent site-visits from Razak.</td>
</tr>
<tr>
<td>Long-term contract</td>
<td>There is a 5-year contract which ends this year and Razak promises to extend it.</td>
</tr>
<tr>
<td>Technical assistance in improving suppliers’ parts and materials</td>
<td>Razak designed the mold of rim of casters for Peyman. Furthermore, Peyman receives some kind of technical advice for quality improvement.</td>
</tr>
<tr>
<td>Expectation of Supplier’s certification</td>
<td>EN-840-5 certification.</td>
</tr>
<tr>
<td>Intensive information sharing</td>
<td>The most important information request is about production cost in order to calculate the market price and subtract 20% and evaluate Peyman’s supplier prices.</td>
</tr>
<tr>
<td>Training and education of a supplier’s personnel</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Exchange of personnel between the two firms</td>
<td>Razak places a quality verifier.</td>
</tr>
<tr>
<td>Supplier involvement in the buyer’s NPD and development</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Direct investment in a supplier by the buying firm</td>
<td>Peyman is supplied by new machineries, material as well as new warehouse and producing site.</td>
</tr>
</tbody>
</table>

Table 4.8: SD Practices from Peyman’s Perspective as the Supplier of Razak
Source: Own creation
4.4.2.2. Success Factors of Supplier Development from Peyman’s Perspective

➢ Buyer-specific Success Factors

Long-term strategic goals: Peyman believes in Razak’s efforts and plans for the improvement of Peyman’s capabilities and hence better performance achievement through personnel education, using modern and up-to-date machines and equipment. Consequently, Razak can increase its reputation through delivery goods in a high level condition.

Top management support: The buyer’s top management supports the SD program apparently. It is obvious in the investments and its supportive behavior can be perceived through the seriousness, encouragement, promises and the pressure put on Peyman for improvement.

Power influence strategy in SD: Peyman is under pressure of Razak to have a better performance through frequent threats such as alternative suppliers or not renewing the contract.

Buyer commitment: Peyman believes in its buyer’s commitment on the SD efforts which can be shown through investments, the 5-year contract that makes a safe situation for Peyman.

➢ Supplier-specific Success Factors

Supplier’s expectations in its strategic objectives: Before establishing the SD program by Razak, Peyman was not aware of such opportunity and “just reaching the minimum level to survive in fluctuating economic condition of Iran was satisfactory enough!”

Conformity of supplier’s capabilities: Peyman was not well-equipped before this SD program to re-align with Razak’s expectations. However, Peyman has considerable investment in human resource, small machineries and equipment as supplements in order to get the benefits of Razak’s investments more. Peyman notes that “it was not easy for a small company like Peyman to get European quality standard i.e. EN840-5”.

Supplier’s commitment: Peyman put its efforts to be committed to all the buyer’s investments and the mutual contract “however, we are always under our buyer’s magnifying glass” the respondent says.
Buyer-supplier Interface Success Factors

Knowledge sharing and transfer: Peyman shares information in terms of reliable sources of raw material—rubber, polymer and metal etc. as well as the experience of wheels and casters production that it has gained through years of producing. Peyman plays a vital role in producing the products with a high quality, timely delivery and low price through capabilities improvement. Hence, Razak does not need to import from foreign sources which is considerable costly due to devaluation of the currency.

Trust: Peyman reveals the trust-related issues through its loyalty, allowing Razak to interfere to production process, openness in financial, cost, resource issues and welcoming the buyer’s verifier to the site without concealment and hesitation. Peyman is certain about Razak’s trust that can be seen through its investments.

Communication methods and effective communications: Peyman is in contact with Razak through telephone, face-to-face meetings and fax successively. The communication is regarded effective by Peyman in terms of volume, openness, accuracy, frequency and credibility.

Long-term commitment: Peyman asserts that the long-commitment on the SD program exists and can be revealed through both willingness to continue the cooperation, investments for having better products, keeping the written or verbal promises, clarity and transparency in business relationship and not using the shared information opportunistically.

4.4.2.3. Barriers to Supplier Development from Peyman’s Perspective

Buyer-specific Barriers

Lack of Buyer’s top management support: Peyman demonstrates that the buyer’s top management supports the SD program as mentioned previously.

The buying firm’s credibility to its supplier: According to the respondent, Razak is well-organized in placing orders, “who should be credible is Peyman to meet large volume of orders in a timely manner”. Further, the buyer is too sensitive to received non-conforming items and returns the delivered products even with minor defects in quality, shape and appearance etc.
**Bias-related Barriers:** Peyman believes to be paid ample attention by the buyer through acknowledgement of big and small orders and declares that is dependent on Razak because 90% of its sales belong to this buyer.

**The buying firm’s effectiveness:** The SD program that is run by Razak is totally fruitful for Peyman’s growth. The increase of production capacity and consequently increase of turnover and sales percentage are regarded as the profitability of the relationship.

**Misguided SD objectives:** The most important objective for Peyman is the benefits of the mutual relationship when the respondent mentions that “until we reap the benefits, we are not curious to know our buyer’s short- or long-terms strategies, plans and objectives!”

**The buyer’s reluctance to SD:** According to Peyman’s point of view, it is mandatory to be invested by Razak to have more improvements in future associated with its capabilities and performance which Razak does not tend to invest more in the company.

➤ **Supplier-specific Barriers**

**The supplier’s lack of commitment:** It is said that commitment of the SD program exists in both parties.

**Insufficient supplier resource:** Through the SD efforts, Peyman has improved noticeably. Shortage of workers and machineries is still seen when it receives big orders and has difficulties to provide the demanded products in a timely manner and right quantity.

**The supplier complacency:** Peyman perceives dissatisfaction and satisfaction of the buyer through frequent evaluation reports of each delivery. The reports usually reveal random material test, number of defected items associated with quality/appearance/shape, conformity with EN840-5 standard and number of delivered goods compared with packing list, etc. The supplier does not have any mechanism to get mentioned information.

**The supplier’s reluctance to SD:** The supplier demonstrates that it has ample willingness to engage in the SD program.
Buyer-supplier Interface Barriers

**Lack of trust:** According to Baharestan trust exists in the relationship.

**Insufficient inducements to the supplier:** Peyman receives incentives through Razak’s promise to extend the contract.

**Poor alignment of organizational cultures:** Peyman does not have any problem with the supplier in terms of organizational culture.

**Poor communication and feedback:** Peyman believes in effective, clear and two-way communication with its partner. Peyman states that there is no problem or difficulty in the buyer or its company which might hinder the effectiveness of communication and/or its volume.

**Power related issues:** Peyman states that the current contract is a unilateral contract in favor of Razak. Peyman had to accept it five years ago otherwise; it lost the opportunity to be invested in by Razak. Thus, it is not surprising if Razak gets the favorable terms in negotiation due to the size and the investment it has in Peyman’s.

**Lack of profitability:** Peyman confirms that the SD program is beneficial for the counterparts through gaining profits but in different ways. Razak is satisfied with the delivered products in terms of quantity, quality and delivery time. Peyman is enjoying the growth of its capabilities and performance which guarantees the future survival.

**Risk of losses:** Peyman fears to lose Razak for any reason and thus lose its considerable sales volume. Due to last five-year collaboration with Razak, Peyman took a long distance from its previous customers. In nowadays competitive market, hunting the opportunity to attract the prospects is highly demanding and needs considerable time and energy.
In this chapter the analysis of the empirical data collected from three dyadic cases is presented. Firstly, within case analysis is conducted to show the dyadic perspective of each case in the context of SD. Afterwards, the cross-case synthesis is conducted to highlight area of similarities and differences observed between the cases and compare them with the theoretical framework.

Figure 5.1 reveals the way the analysis is conducted in this research. First, the within case (is indicated with black horizontal ‘A’ arrows) is applied in each case i.e. each buying firm and its supplier to form the dyadic perspective. Second, the cross-case (is indicated with black up-down ‘B’ arrows) technique is conducted to indicate possible similarities and/or differences between the three dyads’ SD perspectives. Simultaneously, pattern matching (is indicated with black ‘B*’ arrows) is used in order to analyze the dyadic views on SD i.e. practices, success factors and barriers with the theoretical framework in this study. Doing so enhances answering the research questions (RQs) of this research.
Figure 5.1: The Relation between Research Questions, Empirical Data and Theoretical Framework
Source: Own Creation
5.1. **Within Case Analysis (A)**

In this section, the analysis within each dyad is conducted through investigating the individual views of the buyer and its respective supplier to combine them to reach the dyadic view and to clarify the respective practices, success factors and the barriers in each dyadic case.

5.1.1. **Dyad I – Persian Sanat Baharestan Manufacturing Co., and the Iranian Petrochemical Company**

Persian is the buyer in the dyad and Petrochemical Company is the supplier of plastic raw materials.

5.1.1.1. **Supplier Development Practices in Dyad I**

Baharestan and its supplier have piloted a series of SD activities initiated at deficiencies in the supplier’s packaging systems i.e. bulk exactly after foundation of Baharestan. This can be interpreted that is because knowing Petrochemical Company over previous collaboration of the owner of Baharestan in his former companies. Deficient packaging of material has caused considerable waste during transport, storage and loading processes. In the first year of cooperation, aside from receiving orders and delivering products, both partners have agreed on packaging development through renting plastic pallets from Baharestan to Petrochemical site not only for this buyer consumption (delivering in palletized packages) but also to improve the whole packaging system. According to the buyer, there was noticeable overhead cost associated with collecting and replacing the pallets from other customers of the supplier across the country. The one–year trial experience has been developed into selling the pallets instead which is paid against the production cost only.

Table 5.1 demonstrates the practices applied in the SD scope according to Baharestan’s and the supplier’s views that what kinds of activities are done in the dyad. It is important to verify these activities that are done in the supplier’s from perspective of the supplier as well in order to build a dyadic view (See Figure 3.1, the yellow parts). Doing so enhances understanding the perception of both counterparts which indicates the dyadic perspective in respect of the SD activities in the supplying firm.
## Dyad I – Baharestan and Petrochemical Companies

<table>
<thead>
<tr>
<th>SD Practices</th>
<th>Perspective of Baharestan as the Buyer</th>
<th>Perspective of Petrochemical Company as the Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low buyer’s involvement</strong></td>
<td><strong>The Buyer</strong></td>
<td><strong>Comments</strong></td>
</tr>
<tr>
<td>Competitive pressure</td>
<td>Similar views</td>
<td>Similar views</td>
</tr>
<tr>
<td>Supplier evaluation</td>
<td>- Random quality testing of received material</td>
<td>- Technical tests upon each delivery</td>
</tr>
<tr>
<td></td>
<td>- Quantity control with ±1% discrepancy</td>
<td>- Quantity evaluation</td>
</tr>
<tr>
<td>Buying from a limited number of</td>
<td>Similar views</td>
<td>Similar views</td>
</tr>
<tr>
<td>suppliers per purchased item</td>
<td>- The black market</td>
<td>- Technical tests upon each delivery</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Quantity evaluation</td>
</tr>
<tr>
<td>Raising performance expectations</td>
<td>Similar views</td>
<td>Similar views</td>
</tr>
<tr>
<td></td>
<td>- Better delivery and lead time (exclude contract)</td>
<td>- Raw material specification improvement</td>
</tr>
<tr>
<td></td>
<td>- Better quality</td>
<td>- Price reduction</td>
</tr>
<tr>
<td></td>
<td>- Cost Reduction (exclude contract)</td>
<td></td>
</tr>
<tr>
<td>Communication and feedback</td>
<td>Similar views</td>
<td>Similar views</td>
</tr>
<tr>
<td></td>
<td>- Weekly contacts</td>
<td>Similar views</td>
</tr>
<tr>
<td></td>
<td>- Weekly and monthly feedback of delivered products</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Formal communication</td>
<td></td>
</tr>
<tr>
<td><strong>Moderate buyer’s involvement</strong></td>
<td><strong>The Buyer</strong></td>
<td><strong>Comments</strong></td>
</tr>
<tr>
<td>Knowledge Transfer</td>
<td>Similar views</td>
<td>Similar views</td>
</tr>
<tr>
<td></td>
<td>- Frequent technical information sharing</td>
<td>- Receiving some sort of technical information (material compatibility to</td>
</tr>
<tr>
<td></td>
<td>- Inviting the supplier’s production engineers</td>
<td>production)</td>
</tr>
<tr>
<td></td>
<td>- Written reports of technical suggestions</td>
<td></td>
</tr>
<tr>
<td>Recognition</td>
<td>Similar views</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplier incentives</td>
<td>Conflicting views</td>
<td>Site visit</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------</td>
<td>------------</td>
</tr>
<tr>
<td>- The buyer’s promise of prolonging the contract</td>
<td>- Confirmation of the material especially new ones by the buyer</td>
<td>------------</td>
</tr>
<tr>
<td>Site visit</td>
<td></td>
<td>--------</td>
</tr>
<tr>
<td>Long-term contract</td>
<td>Similar views</td>
<td>- Tendency to extend the 5-year contract to a 10-year</td>
</tr>
<tr>
<td>Technical assistance in improving suppliers’ parts and materials</td>
<td>Similar views</td>
<td>- Inviting the supplier’s engineers to present non-conformance material in the production procedure</td>
</tr>
<tr>
<td>Expectation of Supplier’s certification</td>
<td>Similar views</td>
<td>- Test new material in production process (out of laboratory condition)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>High buyer’s involvement</th>
<th>The Buyer</th>
<th>Comments</th>
<th>The Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensive information sharing</td>
<td>- Export issues</td>
<td>Similar views</td>
<td>- International prices and local prices of materials</td>
</tr>
<tr>
<td></td>
<td>- Production process information</td>
<td></td>
<td>- New findings in polymer industry</td>
</tr>
<tr>
<td></td>
<td>- Receive polymeric news, prices, technical information</td>
<td></td>
<td>- Technical information of new material</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Receiving export news and production process information</td>
</tr>
<tr>
<td>Training and education of a supplier’s personnel</td>
<td></td>
<td>Similar views</td>
<td></td>
</tr>
<tr>
<td>Exchange of personnel between the two firms</td>
<td></td>
<td>Similar views</td>
<td></td>
</tr>
<tr>
<td>Supplier involvement in the buyer’s NPD and development</td>
<td></td>
<td>Similar views</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Mold design suggestions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct investment in a supplier by buyer</td>
<td></td>
<td>Similar views</td>
<td></td>
</tr>
</tbody>
</table>

*Table 5.1: Summary of the views on SD Practices in Dyad I*

*Source: Own Creation*
The perception of Petrochemical Company is in line with different SD activities that Baharestan initiates. However, some conflicting views can be seen. The supplier is totally sure that Baharestan does not buy the material from an alternative supplier. According to my view, this sureness can be a reason of the supplier’s exclusiveness and monopoly of the materials in the country. However, growing opportunistic behavior has formed a black market in order to gain that kind of unavailable material in the supplying firm. Therefore, Baharestan is provided with higher prices and sometimes poor quality and packaging, although it cannot be regarded as one of the activities focusing on the SD i.e. improvement of the performance and/or capabilities of the supplier. In this regard, it should be noted that despite price reduction expectation, Petrochemical Company does not change the price since it is out of the supplier’s hands from my perspective. The prices are defined and dictated periodically to the Petrochemical Company.

Baharestan assert that it provides the supplier with technical information in large volume frequently. However, Petrochemical Company does not think that it is provided with such amount of technical information. This could be interpreted that the supplier is the producer of various kinds of raw material and delivers to different companies in different industries; the received information cannot be regarded much and frequent for Petrochemical Company. According to my understanding, the R&D department of the supplier is more professional and well-experienced to examine the material, so the received information may be considered not important enough.

Baharestan views the prolongation of the contract with its supplier as an incentive towards the supplier. However, Petrochemical Company with the monopoly on the market doesn’t see this eagerness that way. It might be because of the power of the supplier i.e. monopolized manner and its 1% sales volume compared to the buyer’s 90% purchase volume. Confirmation of a type of material in particular new type by Baharestan is important due to its reputation among manufacturers and is regarded as the stimulation for Petrochemical Company to some extent. This is because the influence of the buyer on other manufactures that enhanced convincing the consumers to use the recommended material.

Regarding communication, the supplier is organized in a hierarchical and bureaucratic manner which leads it to behave formal in communication based on my view. This
could narrow the informal relationship between the personnel and slow the speed of communication down.

5.1.1.2. Success Factors of Supplier Development in Dyad I

Success factors based on Baharestan and Petrochemical Company’s point of views are formed separately and are revealed in Table 5.2. It demonstrates three different areas: the factors that might initiate from the Baharestan’s side, the enablers that might originate from the Petrochemical Company’s and finally the success factors that could be derived from both parties (See Figure 3.1, the green parts). As it can be seen in Table 5.2, on the one hand, some of the factors are not contributors for the SD efforts in this dyad. On the other hand, the perspective of buying firm and its supplier might differ in some parts.

As stated by Petrochemical Company, it did not have pre-scheduled strategy to be improved by its buyer; the acceptance of SD efforts shows the hunting behavior of Petrochemical Company to get the benefits of the potentials in this collaboration. In my view, the consequences i.e. Petrochemical Company’s customers’ satisfaction and performance improvement as mentioned by its respondent have answered to its continuous improvement goals.

The supplier limits its commitments mostly to the contract’s clauses and the buyer – Baharestan suffers from low commitment in on-time deliveries in terms of other orders. This lack of commitment originates in the current economic sanctions on Petrochemical Company and thus, the limited resource of the supplier is the reason of non-timely deliveries as stated by both parties. This could be regarded as a hindrance to the present SD and success of dyad which is not initiated from the supplier but from the context that both companies are dealing with. The supplier does not show its willingness to a long-term relationship with the buyer transparently. It might be considered as a nature and structure of Petrochemical Company that must obey the dictated rules from the government as well as oil ministry which narrow the relationship to the defined limits.
## Dyad I – Baharestan and Petrochemical Companies

<table>
<thead>
<tr>
<th>SD Success Factors</th>
<th>Perspective of Baharestan as the Buyer</th>
<th>Perspective of Petrochemical Company as the Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Buyer-specific</strong></td>
<td>The Buyer</td>
<td>The Supplier</td>
</tr>
</tbody>
</table>
| Long-term Strategic Goals              | - No defected packaging  
- High quality of material according to order  
- Defining new project for packaging system                                                                 | Similar views                                                                                                                                         | - New design of packaging  
- The buyer’s efforts for supplier’s better performance |
| Top Management Support                 | - Awareness of the benefits of the SD  
- Willingness to more collaboration  
- Meet the supplier’s requirements  
- Invest in new equipment and laboratory                                                                 | Similar views                                                                                                                                         | - Willingness to longevity of the relationship  
- Investment in new equipment and mold |
| Power Influence Strategy in SD         | - Less attention from the supplier  
- Low purchase percentage compared to the supplier                                                                 | Similar views                                                                                                                                         | - Less dependency of the supplier to the buyer  
- Low purchase percentage compared to the supplier sales volume |
| Buyer Commitment                       | - Investment in packaging system exclusively for the supplier  
- Commitment to the contract  
- Presenting willingness to the collaboration                                                                 | Similar views                                                                                                                                         | - Investment in packaging system exclusively for the supplier  
- Willingness prolong mutual agreement |
| Supplier-specific                      | The Buyer                                                                                                                                                           | The Supplier                                                                                                                                               |
| Supplier’s Expectations in its Strategic Objectives | - Increase of supplier’s customers’ satisfaction  
- Improvement of the supplier’s performance  
- The supplier’s reduction in packaging cost and waste                                                                 | Conflicting views                                                                                                                                     | - No pre-set plan  
- No power and influence of the buyer on the supplier’s strategic plans |
<table>
<thead>
<tr>
<th><strong>Conformity of supplier’s Capabilities</strong></th>
<th><strong>Similar views</strong></th>
<th><strong>Supplier’s Commitment</strong></th>
<th><strong>Conflicting views</strong></th>
<th><strong>Buyer-supplier Interface</strong></th>
<th><strong>The Buyer</strong></th>
<th><strong>Comments</strong></th>
<th><strong>The Supplier</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Material quality improvement</td>
<td></td>
<td>Commitment to packaging contract</td>
<td>Commitment to the pallet contract</td>
<td>The Buyer</td>
<td>On-site visit of the supplier’s personnel</td>
<td>- Sharing new issues of plastic industry by the supplier</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low commitment to required raw material order</td>
<td>Material improvement</td>
<td>Buyer-supplier Interface</td>
<td>Production experience sharing to the supplier</td>
<td>- Sharing technical information and manuals for better material treatment by the supplier</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Knowledge Sharing and Transfer</td>
<td>Receiving advice in mold design for material compatibility</td>
<td>- Sharing other manufacturers’ experience associated with know-how of using material properly by the supplier</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Trust</td>
<td>No verifiers in both sides</td>
<td>- Receiving information, problems and modification advice of raw material from the buyer</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Communication Methods and Effective Communications</td>
<td>Tall hierarchical structure of the supplier</td>
<td>- Elimination of verifiers in both sides</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- No sharing of confidential information</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Long-term Commitment</td>
<td>Low commitment to quality of the material due to the economic sanctions</td>
<td>- Fax and telephone contact</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Low commitment to on-time delivery</td>
<td>- No difficulty in effective and two-way communication</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>High commitment to the contract</td>
<td>- The right person might not receive the information due to bureaucratic manner of the organization</td>
<td></td>
</tr>
</tbody>
</table>

Table 5.2: Summary of the views on Success Factors of SD in Dyad I

**Source:** Own Creation
Both parties in ‘Dyad I’ agree on existence of mutual trust which contributes to eliminate the on-site verifiers in other’s site and accelerate the cooperation speed. However, based on the buyer’s view, according to nature of supplier’s organization the trust cannot evolve more and go beyond the present level e.g. confidential information sharing. The government-oriented structure defines the set-up and the level of relationship with other firms. This is assigned by top management and government as stated by Petrochemical Company. It can be assumed why the supplier has to limit itself regardless how the relationship progresses.

The most routine means of communication between the parties are fax and telephone. To some extent, Baharestan sees the communication as a one-way, slow, serial and difficult which takes considerable time to receive the response. This is regarded by me because tall hierarchical structure, arm’s length relationship, bureaucratic principles of the supplying firm. Since the respondent of the supplier mentions that there is a lot of paperwork involved to send any response especially written one to Baharestan. Furthermore, Petrochemical Company not expressly states that sometimes the right person might not receive the information but this is not regarded as a strong hindrance to SD efforts according to its view.

5.1.1.3. Barriers to Supplier Development in Dyad I

Both parties’ perspectives in respect of barriers form Table 5.3. It reveals three different areas; the buyer-specific, the supplier-specific and the buyer-supplier interface pitfalls (See Figure 3.1, the red parts). As it can be seen in the abovementioned table, some of the factors are hindrance to the SD program while others do not have negative influence to the SD. Furthermore, the perspective of buying firm– Baharestan and its supplier– Petrochemical Company differs in terms of some pitfalls.

The exclusive manner of Petrochemical Company, its governmental structure as well as its size (less than 1 % of annual sales goes to Baharestan) results in the buyer’s dependency on the supplier noticeably. The considerable purchase volume of Baharestan (more than 90 %) goes to this supplier and the raw material can be regarded as a strategic commodity for the production. This might explain why Baharestan states that it pays a lot of attention to this relationship in contrast to Petrochemical Company.
## Dyad I – Baharestan and Petrochemical Companies

<table>
<thead>
<tr>
<th>SD Barriers</th>
<th>Perspective of Baharestan as the Buyer</th>
<th>Comments</th>
<th>Perspective of Petrochemical Company as the Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Buyer-specific</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of Buyer’s Top Management Support</td>
<td>- Nothing</td>
<td>Not a barrier</td>
<td>- Nothing</td>
</tr>
<tr>
<td>The buying firm’s Credibility to its Supplier</td>
<td>- Sensitivity to the quality</td>
<td>Similar views</td>
<td>- The buyer’s sensitivity to the quality</td>
</tr>
<tr>
<td></td>
<td>- Deliveries evaluation reports</td>
<td>Not a barrier</td>
<td>- Establishment of quality laboratory</td>
</tr>
<tr>
<td>Bias-related Barriers</td>
<td>- High dependency to the supplier</td>
<td>Not a barrier</td>
<td>- No dependency to the buyer</td>
</tr>
<tr>
<td></td>
<td>- Paying maximum attention to the supplier</td>
<td></td>
<td>- Being paid attention considerably</td>
</tr>
<tr>
<td></td>
<td>- Presenting willingness to the collaboration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Buying Firm’s Effectiveness</td>
<td>- Development of packaging system of the supplier</td>
<td>Similar views</td>
<td>- SD is effective enough to continue</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not a barrier</td>
<td>- Delivery condition improvement</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Material improvement</td>
</tr>
<tr>
<td>Misguided SD Objectives</td>
<td>- Express the buyer’s objectives clearly</td>
<td>Conflicting views</td>
<td>- Objectives are expressed clearly to the supplier</td>
</tr>
<tr>
<td></td>
<td>- No interest from the supplier to perceive shared objectives</td>
<td>Not a barrier</td>
<td></td>
</tr>
<tr>
<td>The buyer’s Reluctance to SD</td>
<td>- Nothing</td>
<td>Similar views</td>
<td>- Nothing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not a barrier</td>
<td></td>
</tr>
<tr>
<td><strong>Supplier-specific</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The supplier’s Lack of Commitment</td>
<td>- Late delivery time due to the lack of resources</td>
<td>Conflicting views</td>
<td>- Keeping all promises by the supplier</td>
</tr>
<tr>
<td></td>
<td>- Dissatisfactory quality</td>
<td>Not a barrier</td>
<td>- Shortage of material or late delivery is due to the economic sanctions</td>
</tr>
<tr>
<td>Insufficient Supplier Resource</td>
<td>- The supplier did not reach the estimated production capacity</td>
<td>Similar views</td>
<td>- The supplier did not reach the estimated production capacity</td>
</tr>
<tr>
<td></td>
<td>- Lack of equipment, chemical substances</td>
<td></td>
<td>- Lack of equipment, chemical substances</td>
</tr>
<tr>
<td>Buyer-supplier Interface</td>
<td>The Buyer</td>
<td>Comments</td>
<td>The Supplier</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------</td>
<td>----------</td>
<td>--------------</td>
</tr>
<tr>
<td><strong>The Supplier Complacency</strong></td>
<td>- Asking the buyer’s satisfaction or/and dissatisfaction is artificial</td>
<td>Conflicting views</td>
<td>- Always asking the buyer’s satisfaction or/and dissatisfaction</td>
</tr>
<tr>
<td><strong>The supplier’s Reluctance to SD</strong></td>
<td>- Reluctance to involve in SD completely</td>
<td>Conflicting views</td>
<td>- Nothing</td>
</tr>
<tr>
<td><strong>Lack of Trust</strong></td>
<td>- Formal relationship</td>
<td>Conflicting views</td>
<td>Not a barrier</td>
</tr>
<tr>
<td><strong>Insufficient Inducements to the Supplier</strong></td>
<td>- No opportunity for encouragement</td>
<td>Not a barrier</td>
<td>- No incentives need</td>
</tr>
<tr>
<td><strong>Poor Alignment of Organizational Cultures</strong></td>
<td>- Nothing</td>
<td>Not a barrier</td>
<td>- Nothing</td>
</tr>
<tr>
<td><strong>Poor Communication and Feedback</strong></td>
<td>- Cannot find the right person to contact in the supplier’s</td>
<td>Similar views</td>
<td>- Bureaucratic manner of the organization might slow the communication’s speed</td>
</tr>
<tr>
<td></td>
<td>- Slow speed of responding</td>
<td></td>
<td>- The right person might not receive the information due to bureaucratic manner of the organization</td>
</tr>
<tr>
<td></td>
<td>- Decentralization of the supplier</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Not being know enough by the supplier</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Power Related Issues</strong></td>
<td>- No bargain power of the buyer</td>
<td>Similar views</td>
<td>- Exclusiveness of the supplier makes it powerful</td>
</tr>
<tr>
<td></td>
<td>- Dictation of strategies and terms by the supplier</td>
<td></td>
<td>- Very low sales volume (less than 1%) from the supplier</td>
</tr>
<tr>
<td></td>
<td>- Very low sales volume (less than 1%) by the supplier while the purchase volume is high from the supplier</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lack of Profitability</strong></td>
<td>- Profitable for both parties</td>
<td>Similar views</td>
<td>- Profitable for both parties</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not a barrier</td>
<td>- The buyer always receives orders from the supplier even in economic recessions in Iran</td>
</tr>
<tr>
<td><strong>Risk of Losses</strong></td>
<td>- Fear of shifting to another pallet producer</td>
<td>Conflicting views</td>
<td>- Nothing</td>
</tr>
</tbody>
</table>

*Table 5.3: Summary of the views on Barriers to SD in Dyad I*

*Source: Own Creation*
Moreover, due to the supplier’s power in negotiation because of aforementioned dominance-related and governmental issues compared with the buyer, an unbalanced and unilateral condition has been formed in favor of Petrochemical Company. Due to the same reasons, the supplier is unwilling to be engaged in the SD effort entirely. These issues hinder the effectiveness of SD.

Petrochemical Company asserts that it realizes the objectives and goals of SD clearly while Baharestan finds the supplier’s reluctance to be acknowledged about the long-term goals of the present SD. It can be interpreted that on the one hand, the nature of buyer as a consumer causes high dependency to the supplier and thus, the supplier’s position in the market and in the eyes of buyer is strengthened greatly. On the other hand, the power that Petrochemical Company has gained from its size, governmental nature and monopoly makes it very difficult for Baharestan as a small private sector to be listened to.

Late delivery time as well as dissatisfactory quality of raw material cause the commitment of Petrochemical Company is undermined in the eyes of Baharestan. The supplier does not see these deficiencies originated from its side which is in the line with Baharestan’s perception as well. According to the collected data and knowledge about the country, current sanctions and lack of government’s supports make it difficult for the supplier to meet the customers’ requirements on time and in acceptable quality.

Petrochemical Company mentions that it cares about customers’ satisfaction, which it is called the claim according to the buyer’s view. Asking about buyer’s satisfaction and dissatisfaction is only paperwork and formalities without taking appropriate reaction. Since, the supplier has the ISO 9001:2000, distributing the opinion poll should be conducted to ask customer’s satisfaction, however, as the buyer stated, according to the history of relationship, these forms are never paid attention noticeably.

As discussed in the previous section, communication between two parties suffers from shortage of good structure from the supplier’s side. Wrong person receives information which hampers on-time, clear and accurate answers. Geographic decentralization of the supplier as well as its bureaucratic structure also could hinder the speed of communication. In addition, Baharestan has the difficulty in being known appropriately by the supplier and thus different follow-up may need to get the appropriate answer.
5.1.2. Dyad II– Persian Sanat Baharestan Manufacturing Co., and Tederic Machinery Co., Ltd.

Persian is the buyer in the dyad and Tederic is the supplier of injection machineries.

5.1.2.1. Supplier Development Practices in Dyad II

The basic buyer-supplier relationship has been started through purchasing injection machineries in 2008. Deeper cooperation is formed due to competitive price of products and some sort of deficiencies of the Tederic’s products in terms of quality gaps compared to European standards and compatibility with raw material used in Iran. Baharestan seems to need a reliable machinery supplier as a partner beside itself in order to guarantee the whole production line’s operations. Commitment on modifying purchased items and applying the same technical requests for future purchase were made by the supplier. The joint working has started to be deeper through establishment of the agency of Tederic in Iran to prevent distance difficulties associated with required technical assistance. This also brings the benefits of potentials of the domestic market for Tederic i.e. the buyer facilitates for the supplier’s market entry. New heavy machinery was ordered and made through joint cooperation and sharing experiential and technical information for reaching better quality in components and machineries’ functioning. It was in the line with supplier’s strategies for expanding its business boarders to Middle East market.

Table 5.4 displays the practices that are applied in the SD scope based on Baharestan’s perspective and Tederic’s viewpoint. In order to have an in-depth overall view of SD practices that are initiated by the buyer– Baharestan, the supplier’s perspective is also included. Therefore, Tederic’s perception of SD practices is also achieved that contributes to shape the dyadic perspective in respect of the SD activities in the supplying firm (See Figure 3.1, the yellow parts).

As is shown in Table 5.4, the supplier and its buyer have similar views regarding practices that are applied in the present SD. This can be interpreted that the mutual perspectives, close partnership and common language in the SD practices exist in the dyad which have been achieved from experience as the relationship progresses.
## Dyad II – Baharestan and Tederic Companies

<table>
<thead>
<tr>
<th>SD Practices</th>
<th>Perspective of Baharestan as the Buyer</th>
<th>Perspective of Petrochemical Company as the Supplier</th>
<th>Comments</th>
<th>The Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low buyer’s involvement</strong></td>
<td><strong>The Buyer</strong></td>
<td></td>
<td><strong>Comments</strong></td>
<td><strong>The Supplier</strong></td>
</tr>
<tr>
<td>Competitive pressure</td>
<td>---------------</td>
<td></td>
<td><strong>Similar views</strong></td>
<td>---------------</td>
</tr>
</tbody>
</table>
| Supplier evaluation | - Technical tests during production process  
- Technical tests before delivery | | **Similar views** | - Quality tests before delivery by the buyer |
| Buying from a limited number of suppliers per purchased item | --------------- | | **Similar views** | --------------- |
| Raising performance expectations | - Better delivery time and lead time  
- Quality of component of machineries | | **Similar views** | - Shorter lead and delivery time  
- Technical and quality improvement of the components |
| Communication and feedback | - Regular contact of employees with the supplier’s main office and its agent in Iran  
- Frequent contact of both top management | | **Similar views** | - Frequent contact of the supplier’s personnel to the buyer’s  
- Top management meetings (twice a year in normal situations)  
- Regular meetings between the supplier’s agent and the buyer |

| **Moderate buyer’s involvement** | **The Buyer** | | **Comments** | **The Supplier** |
| Knowledge Transfer | - Transferring technical requests rather than technical information  
- Inviting the supplier technical engineers | | **Similar views** | - Technical information sharing  
- Having on-site discussion by the supplier’s technical engineers |
| Recognition | - Advertisements  
- Inviting the supplier’s top management in formal banquets and exhibition | | **Similar views** | - Introducing the supplier’s products to other manufacturers  
- Inviting the supplier to exhibition  
- Advertisements |
<table>
<thead>
<tr>
<th>Supplier incentives</th>
<th>Site visit</th>
<th>Long-term contract</th>
<th>Technical assistance in improving suppliers’ parts and materials</th>
<th>Expectation of Supplier’s certification</th>
<th>High buyer’s involvement</th>
<th>The Buyer</th>
<th>Comments</th>
<th>The Supplier</th>
</tr>
</thead>
</table>
| - Promise of purchase  
- Recommendation & persuading other factories | - Two separate site visits during producing and before dispatch  
- Decrease of site visits over time | - Extending the 1-year contract to a 5-year | - Technical suggestions for components improvement and changes | - CE standard  
- ISI standard | - Intensive information sharing  
- Sharing all available technical information  
- Sharing the financial information in respect of sales | Similar views | Similar views | Similar views |
| Similar views | Similar views | Similar views | Similar views | Similar views | Similar views | Similar views | Similar views | Similar views |
| - Support the supplier in Iran market  
- Promise to purchase  
- Recommendation | - Inspection before assembling  
- Initial tests before delivery  
- Decrease of site visits over time | - 5-year contract | - Technical suggestions to improve or change components and parts | - CE standard  
- ISI standard | - Sharing information of production process, production cost, components and parts cost  
- Receiving information of marketing, competitors’ prices, current biddings information, new laws and decisions by the buyer | | | |

**Table 5.4:** Summary of the views on SD Practices in Dyad II  
**Source:** Own creation
5.1.2.2. Success Factors of Supplier Development in Dyad II

The factors that influence SD activities for the success of Baharestan and Tederic are molded based on each party’s viewpoint which is mentioned in Table 5.5. It compromises three different areas; buyer–, supplier– specific and finally the buyer – supplier interface success factors (See Figure 3.1, the green parts). As it can be seen in the aforementioned table, on the one hand, some of the factors are not enablers for the SD program in this dyad. On the other hand, the perspective of buying firm and its supplier might differ in some parts.

Baharestan influences the changes in the supplier’s performance and capabilities i.e. improvement through the shared information, request, promises as well as recommendations. Surprisingly, Tederic perceives it as the willingness of the buyer to the relationship. In my view, this common view can demonstrate the well-organized and deep collaboration between counterparts that has been gained over time on a collegial basis.

Furthermore, the willingness of the buyer to expand its market share could be seen as the contributor in the present collaboration and the SD program. Establishing Iran agent of Tederic is the result of this tendency that causes considerable market share for the supplier. Baharestan is also enjoying the improvement of its demanded machineries in turn. Additionally, as stated by supplier, Tederic has the SD program experience and acknowledgement about the potential benefits of SD. It is now obvious why both firms enable to align their strategic objectives associated with success of the present SD and create mutual cooperative relationship.

According to both parties, the intensity of information sharing is high between the two companies but in different areas. On the one hand, Baharestan shares market information as well as those kinds of information and production experience that leads the supplier to present the most compatible machineries according to domestic demands e.g. material, geographical, electricity and water compatibility. On the other hand, Tederic shares technical information in respect of installation manuals, machineries functioning, maintenance etc. moreover, due to the joint share in Iran agent, the supplier shares those kinds of information associated with financial, cost and accounting information to calculate the competitive price.
## Dyad II – Baharestan and Tederic Companies

<table>
<thead>
<tr>
<th>SD Success Factors</th>
<th>Perspective of Baharestan as the Buyer</th>
<th>Perspective of Tederic as the Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Buyer-specific</strong></td>
<td><strong>The Buyer</strong></td>
<td><strong>Comments</strong></td>
</tr>
<tr>
<td>Long-term Strategic Goals</td>
<td>- Improve the supplier’s performance and capabilities to achieve European standards</td>
<td>Similar views</td>
</tr>
<tr>
<td>Top Management Support</td>
<td>- Awareness of the benefits of the SD</td>
<td>Similar views</td>
</tr>
<tr>
<td></td>
<td>- Willingness to longevity of the relationship</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Investments in the supplier’s agency in Iran</td>
<td></td>
</tr>
<tr>
<td>Power Influence Strategy in SD</td>
<td>- Influence power by information exchange, recommendation, promise and request</td>
<td>Similar views</td>
</tr>
<tr>
<td>Buyer Commitment</td>
<td>- Keeping verbal and written promises</td>
<td>Similar views</td>
</tr>
<tr>
<td></td>
<td>- Consider the supplier as a partner</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Supportive behavior</td>
<td></td>
</tr>
</tbody>
</table>

<p>| <strong>Supplier-specific</strong> | <strong>The Buyer</strong>                           | <strong>Comments</strong>                          | <strong>The Supplier</strong>                             |
| Supplier’s Expectations in its Strategic Objectives | - Increase the supplier’s market share | Similar views | - Previous SD experience by the supplier |
| | - Capabilities improvement | | - Enter to new markets by the supplier |
| Conformity of supplier’s Capabilities | - Supplier’s investments in its equipment | Similar views | - Recognize the Middles East market preference through Iran |
| | | | - Investments in equipment, human resource etc. |</p>
<table>
<thead>
<tr>
<th>Supplier’s Commitment</th>
<th>The Buyer</th>
<th>Comments</th>
<th>The Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>- The supplier’s loyalty</td>
<td>- The supplier’s loyalty</td>
<td>Similar views</td>
<td>- The supplier’s loyalty</td>
</tr>
<tr>
<td>- The supplier’s investments in its capabilities</td>
<td>- Relationship growth</td>
<td></td>
<td>- Relationship growth</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Buyer-supplier Interface</th>
<th>The Buyer</th>
<th>Comments</th>
<th>The Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Sharing and Transfer</td>
<td>- Sharing experience of production process</td>
<td>Similar views</td>
<td>- Sharing experience of production process by the buyer</td>
</tr>
<tr>
<td></td>
<td>- Sharing technical and general information e.g. material, water, electricity types in Iran</td>
<td></td>
<td>- Sharing technical information by the supplier</td>
</tr>
<tr>
<td></td>
<td>- Sharing Iran market information and preferences</td>
<td></td>
<td>- Sharing know-how of machineries operation by the supplier</td>
</tr>
<tr>
<td>Trust</td>
<td>- Openness in financial and cost information by the supplier</td>
<td>Similar views</td>
<td>- Openness in financial and cost information by the supplier</td>
</tr>
<tr>
<td></td>
<td>- Payment flexibility and giving credits by the supplier</td>
<td></td>
<td>- Flexible Payment for the buyer</td>
</tr>
<tr>
<td></td>
<td>- Honesty of both parties</td>
<td></td>
<td>- Loyalty of the supplier</td>
</tr>
<tr>
<td></td>
<td>- High sharing of intensive market and competitors information by the buyer</td>
<td></td>
<td>- High sharing of intensive market and competitors information by the buyer</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Communication Methods and Effective Communications</th>
<th>The Buyer</th>
<th>Comments</th>
<th>The Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>- E-mail, fax and telephone</td>
<td>- E-mail, fax and telephone</td>
<td>Similar views</td>
<td>- E-mail, fax and telephone</td>
</tr>
<tr>
<td>- Regular meeting with the supplier agency in Iran</td>
<td>- Regular meeting with the supplier agency in Iran</td>
<td></td>
<td>- Regular meeting with the supplier agency in Iran</td>
</tr>
<tr>
<td>- Face-to-face meetings with top management</td>
<td>- Face-to-face meetings with top management</td>
<td></td>
<td>- Face-to-face meetings with top management</td>
</tr>
<tr>
<td>- Ad hoc meetings of both engineers</td>
<td>- Ad hoc meetings of both engineers</td>
<td></td>
<td>- Ad hoc meetings of both engineers</td>
</tr>
<tr>
<td>- No need to wait for the supplier’s response</td>
<td>- No need to wait for the supplier’s response</td>
<td></td>
<td>- No need to wait for the supplier’s response</td>
</tr>
<tr>
<td>- English problem in communication</td>
<td>- English problem in communication</td>
<td></td>
<td>- English problem in communication</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Long-term Commitment</th>
<th>The Buyer</th>
<th>Comments</th>
<th>The Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Concerning the supplier in NPD</td>
<td>- Respect to agreements and promises by both</td>
<td>Similar views</td>
<td>- Respect to agreements and promises by both</td>
</tr>
<tr>
<td>- See each other as a partner</td>
<td>- See each other as a partner</td>
<td></td>
<td>- See each other as a partner</td>
</tr>
<tr>
<td>- Long-term investments by both</td>
<td>- Building a friendship</td>
<td></td>
<td>- Building a friendship</td>
</tr>
<tr>
<td>- Commitment to the promises and relationship</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5.5: Summary of the views on Success Factors of SD in Dyad II
Source: Own Creation
The communication methods are e-mail, fax and telephone successively between specific personnel of buyer and the supplier’s sales department along with regular meetings of top management (twice a year in normal situations) as well as frequent meetings (once a month) with Iran agent in terms of sales issues. In my view, the communication in this dyad is partially special since it is neither completely between personnel nor between specific departments. Lack of enough knowledge in English leads them to communicate through assigned personnel in the buyers with the sales department of Tederic who know English language well to avert probable misunderstandings.

In general, both parties believe in effective two-way communication. However, sometimes, English language could make problem to perceive technical terms correctly. Furthermore, it should be mentioned that the fluctuating economic and politic conditions of Iran affect the accuracy of the shared information which is not originated in buyer’s side but the context of relationship. However, by creating climate of responsibility and commitment ‘Dyad II’ fulfills to make communication efficient and effective.

5.1.2.3. Barriers to Supplier Development in Dyad II

Referring to Table 5.6, the barriers of the SD program in ‘Dyad II’ are illustrated according to each party’s perspective. It reveals three different areas; the buyer-specific, the supplier-specific and the buyer-supplier interface barriers (See Figure 3.1, the red parts). As it can be seen in the abovementioned table, some of the mentioned pitfalls are hindrance to the SD efforts and some do not have effect to the present SD in this dyad. Furthermore, the perspective of buying firm—Baharestan and its supplier—Tederic differs in some aspects.

The buyer regards its credibility in its continuous emphasis on quality through quality test, detailed reports, request of quick action and replacement from the supplier. The supplier in turn perceives this sensitiveness. Seldom, a poor purchasing schedule occurs from the buyer’s side that causes a lot of efforts for Tederic. Nevertheless, the phrase of “seldom happening” underlines the fact that this kind of deficiency can be neglected which might not defeat the buyer’s credibility in the eyes of supplier noticeably. According to in-depth relationship the supplier understands the buyer’s problems.
Furthermore, Tederic perceives the buyer’s emphasis on quality as the objective of the present SD as too quality strictness. This might be partly because the nature of the supplier as a foreign company that is not familiar with quality requirements of Iran market. It is also partly due to receiving rare feedbacks associated with poor quality from other customers excluding Iran, as the respondent of Tederic states.

On the one hand, the buyer has the unwillingness to be engaged more in the sales issue in the local market due to its nature as a producer not a seller. On the other hand, the supplier is reluctant to invest in those capabilities to produce heavy machineries due to limited financial resources and not having enough market demands. Interestingly, none of the counterparts realizes such reluctances from other side. As discussed previously, communication in the dyad is effective and therefore, none of the parties demonstrate this reluctance to another one which indicates the stabilized partnership and the strong enthusiasm to longevity of the relationship. Interestingly, according both firms’ point of views, this could not hinder the SD efforts and the further mutual benefits.

Both parties realize some risks of losses. Baharestan is threaten by switching cost to another supplier if this relationship is ended for any reason while the supplier fears to lose its export license and will be imposed sanctions if the sales volume exceeds the limits that are assigned by United States.
### Dyad II – Baharestan and Tederic Companies

<table>
<thead>
<tr>
<th>SD Barriers</th>
<th>Perspective of Baharestan as the Buyer</th>
<th>Perspective of Tederic as the Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Buyer-specific</strong></td>
<td>The Buyer</td>
<td>Comments</td>
</tr>
<tr>
<td>Lack of Buyer’s Top Management</td>
<td>- Nothing</td>
<td>Similar views Not a barrier</td>
</tr>
<tr>
<td>Support</td>
<td></td>
<td>- Nothing</td>
</tr>
<tr>
<td>The buying firm’s Credibility</td>
<td>- The buyer’s sensitivity to the quality&lt;br&gt;- Expectation of quick response for non-conformance components&lt;br&gt;- Full report of each delivery</td>
<td>Conflicting views Not a barrier&lt;br&gt;- Unexpected changes request in the order (seldom)</td>
</tr>
<tr>
<td>to its Supplier</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bias-related Barriers</td>
<td>- High dependency to the supplier&lt;br&gt;- Paying considerable attention to the supplier</td>
<td>Similar views Not a barrier&lt;br&gt;- Moderate dependency to the buyer&lt;br&gt;- Being paid enough attention</td>
</tr>
<tr>
<td>The Buying Firm’s Effectiveness</td>
<td>- SD is effective for both&lt;br&gt;- Market share increase for the supplier&lt;br&gt;- Capabilities improvement of the supplier&lt;br&gt;- Qualified machineries&lt;br&gt;- Competitive prices&lt;br&gt;- On-site aftersales service</td>
<td>Similar views Not a barrier&lt;br&gt;- SD is effective for both&lt;br&gt;- Market share increase for the supplier&lt;br&gt;- More power to introduce the brand of the supplier in international market</td>
</tr>
<tr>
<td>Misguided SD Objectives</td>
<td>- Objectives are expressed clearly to the supplier&lt;br&gt;- Attempting to convince the supplier about quality-related issues</td>
<td>Conflicting views Not a barrier&lt;br&gt;- Too much sensitivity of quality by the supplier cannot be realized&lt;br&gt;- Accept presented SD goals</td>
</tr>
<tr>
<td>The buyer’s Reluctance to SD</td>
<td>- Low tendency to involve in machineries’ sales issue in the local market</td>
<td>Conflicting views Not a barrier&lt;br&gt;- Nothing</td>
</tr>
<tr>
<td>Supplier-specific</td>
<td>The Buyer</td>
<td>Comments</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>The supplier’s Lack of Commitment</td>
<td>- Nothing</td>
<td>Similar views</td>
</tr>
<tr>
<td>Insufficient Supplier Resource</td>
<td>- Considerable improvement compared with the past</td>
<td>Similar views</td>
</tr>
<tr>
<td></td>
<td>- Expecting of more improvement in the supplier’s capabilities</td>
<td>Not a barrier</td>
</tr>
<tr>
<td>The Supplier Complacency</td>
<td>- The buyer is rarely asked for feedback.</td>
<td>Similar views</td>
</tr>
<tr>
<td></td>
<td>- Evaluation reports are from the buyer’s side</td>
<td>Not a barrier</td>
</tr>
<tr>
<td>The supplier’s Reluctance to SD</td>
<td>- Nothing</td>
<td>Conflicting views</td>
</tr>
<tr>
<td>Buyer-supplier Interface</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of Trust</td>
<td>- Nothing</td>
<td>Similar views</td>
</tr>
<tr>
<td>Insufficient Inducements to the Supplier</td>
<td>- The supplier perceives the inducements (determination as an exclusive supplier, support in sales to others, promise for future purchase) from the buyer</td>
<td>Similar views</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not a barrier</td>
</tr>
<tr>
<td>Poor Alignment of Organizational Cultures</td>
<td>- Nothing</td>
<td>Similar views</td>
</tr>
<tr>
<td>Poor Communication and Feedback</td>
<td>- Some difficulties to understand technical language</td>
<td>Similar views</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not a barrier</td>
</tr>
<tr>
<td></td>
<td>Power Related Issues</td>
<td>Lack of Profitability</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>- The buyer has the power in negotiation since it is a customer</td>
<td>- Profitable for both parties</td>
</tr>
<tr>
<td></td>
<td>- Purchase of heavy machineries which in the supplier has less experience</td>
<td>- The buyer always receives competitive price with acceptable quality and on-site after sales service</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- The supplier gains capabilities growth</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- The supplier achieves considerable market share</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- The supplier’s ability to enter to new markets due to its improvement</td>
</tr>
<tr>
<td>Similar views</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not a barrier</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5.6: Summary of the views on Barriers to SD in Dyad II  
Source: Own Creation
5.1.3. Dyad III– Raza Chemie Manufacturing Co., and Sazeh Gostar Peyman Co.,

Razak is the buyer in the dyad and Peyman is the supplier of rubber wheels and casters.

5.1.3.1. Supplier Development Practices in Dyad III

The business relationship between two companies has started since 2005. More collaboration between two firms has been formed according to strategic goals of Razak to improve the quality of received items through manufacturing the component by itself instead of buying. However, due to respective costs and time, the buyer has decided to invest assets, resources in one of its present suppliers to improve its quality and quantity of the products. Doing so enhances the supplier to deliver acceptable quality according to European standard in the right quantity and the right time.

The perception of buying firm and its supplier are considered in order to gain comprehensive view of SD practices that are initiated by Razak i.e. the dyadic perspective of the SD activities in this dyadic relationship (See Figure 3.1, the yellow parts).

As is shown in Table 5.7, the perception of the Razak and Peyman is partially similar regarding what kind of practices are applied in the present SD. However, the supplier realizes that Razak tries to hide it from other customers. This might be partly because of clauses of the contract. Since, the contract makes it clarified for the supplier not to sell particular wheels and casters of mobile waste containers to other customers in the market. The buyer makes the product in an exclusive manner in order to maintain the competitive edge compared to other competitors. By doing so, Razak tries to motivate Peyman in other ways e.g. friendly ceremonies and giving gifts to the supplier’s hard workers. According to the buyer’s perception, the orders are ample for the supplier’s production capacity and thus the supplier does not need sell the same products to other firms in the SC. Meanwhile, the investments in the capabilities of the supplier can be interpreted as another reason for the supplier’s belief that is hidden from other firms by Razak.
<table>
<thead>
<tr>
<th>SD Practices</th>
<th>Perspective of Baharestan as the Buyer</th>
<th>Comments</th>
<th>Perspective of Petrochemical Company as the Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low buyer's involvement</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competitive pressure</td>
<td>- Bidding</td>
<td>Similar views</td>
<td>- Biddings</td>
</tr>
<tr>
<td></td>
<td>- Threatening the supplier by other suppliers’ prices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplier evaluation</td>
<td>- Quality test of material during production according to quality standards</td>
<td>Similar views</td>
<td>- Random testing based on quality standard and witness sample before and after each delivery</td>
</tr>
<tr>
<td></td>
<td>- Random quality testing of deliveries according to witness sample</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Quantity evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buying from a limited number of suppliers per purchased item</td>
<td>- The buyer has four more suppliers</td>
<td>Similar views</td>
<td>- Existing of alternative suppliers</td>
</tr>
<tr>
<td>Raising performance expectations</td>
<td>- High quality products according to quality standards</td>
<td>Similar views</td>
<td>- Better quality</td>
</tr>
<tr>
<td></td>
<td>- Flexible delivery</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- On-time delivery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication and feedback</td>
<td>- Frequent contacts on warehouse level</td>
<td>Similar views</td>
<td>- Regular contact with the buyer</td>
</tr>
<tr>
<td></td>
<td>- Frequent contact of both top management</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Reports of each delivery</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Feedback of quality evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Moderate buyer's involvement</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge Transfer</td>
<td>- Sharing of technical information, new subjects about material and standards by the buyer</td>
<td>Similar views</td>
<td>- Meetings and on-site consultation</td>
</tr>
<tr>
<td></td>
<td>- On-site consultation and exchange of technical knowledge</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dyad III – Razak and Peyman Companies
<table>
<thead>
<tr>
<th>Recognition</th>
<th>Conflicting views</th>
<th>Supplier incentives</th>
<th>Similar views</th>
<th>Site visit</th>
<th>Similar views</th>
<th>Long-term contract</th>
<th>Similar views</th>
<th>Technical assistance in improving suppliers’ parts and materials</th>
<th>Similar views</th>
<th>Expectation of Supplier’s certification</th>
<th>Similar views</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Inviting the supplier’s personnel twice a year to have a friendly launch</td>
<td>- The supplier is hidden by the buyer from other customers</td>
<td>- Promise of 100 % purchase from this supplier</td>
<td>- Promise of increase of purchases, investments</td>
<td>- Extending the contract</td>
<td>- Extending the present 5-year contract to another 5-year</td>
<td>- Design of component’s mold by the buyer</td>
<td>- Technical advice</td>
<td>- Designing the mold of some plastic components</td>
<td>- Design of component’s mold by the buyer</td>
<td>- EN-840-5 standard</td>
<td>- EN-840-5 standard certificate</td>
</tr>
<tr>
<td>- Giving gifts to the supplier’s hard workers</td>
<td></td>
<td>- Extending the contract</td>
<td></td>
<td>- Receiving regular site-visits</td>
<td></td>
<td></td>
<td></td>
<td>- Technical advice to improve material quality</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>High buyer’s involvement</th>
<th>The Buyer</th>
<th>Comments</th>
<th>The Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensive information sharing</td>
<td>- Ask for the supplier’s financial information (sales, cost production, components’ prices)</td>
<td>Similar views</td>
<td>- Sharing the supplier’s production cost and component price</td>
</tr>
<tr>
<td>Training and education of a supplier’s personnel</td>
<td>**********</td>
<td>Similar views</td>
<td>**********</td>
</tr>
<tr>
<td>Exchange of personnel between the two firms</td>
<td>- Having quality officer in the supplier’s</td>
<td>Similar views</td>
<td>- Quality verifier by the buyer</td>
</tr>
<tr>
<td>Supplier involvement in the buyer’s NPD and development</td>
<td>**********</td>
<td>Similar views</td>
<td>**********</td>
</tr>
<tr>
<td>Direct investment in a supplier by the buying firm</td>
<td>- Purchase of machineries, tools and equipment</td>
<td>Similar views</td>
<td>- Investment of new machineries by the buyer</td>
</tr>
<tr>
<td></td>
<td>- Providing new factory site and warehouse</td>
<td></td>
<td>- Receiving material and components</td>
</tr>
<tr>
<td></td>
<td>- Supplying some of material and components</td>
<td></td>
<td>- New warehouse and producing site from the buyer</td>
</tr>
</tbody>
</table>

Table 5.7: Summary of the views on SD Practices in Dyad III

Source: Own Creation
5.1.3.2. Success Factors of Supplier Development in Dyad III

The factors influence the SD efforts for the success of ‘Dyad III’ are conducted based on each party’s view point which is mentioned in Table 5.8. It consists of three different areas; the factors that might initiate from the buyer’s side, the enablers that could derive from the supplier’s and finally the interface success factors (See Figure 3.1, the green parts). The mentioned table reveals different and similar opinions of each company of the dyad as well as indicates those factors that are not enablers for the SD program.

Razak influences the supplier to change and improve its capabilities and performance by means of promise, threat and legalistic pleas while Peyman realizes only the threats applied by the buyer as the influencing means. This partly because the supplier is smaller than the buyer in terms of sales percentage and has been invested by the buyer.

In my view, Peyman perceives the severe behaviors rather than promises or requests due to its weak position in terms of knowledge, technology and capabilities compared to its buyer. Furthermore, as stated by the supplier, it did not have long-term plans for its capabilities and performance improvement before the present SD program. The final goal for the supplier was surviving in the market but, the supplier is now, with the help of its buyer, to some extent aware of joint recognition.

According to both companies, communication methods are fax, face-to-face meetings and telephones through parallel communication. Peyman is satisfied by the quality of mutual communication; however, the buyer suffers from delays in receiving response, not enough attention from the supplier and need of many follow-up especially in respect of evaluation and feedback. The reason behind the conflicting views is apparent, since on the one hand, the buyer attempts to transfer ample, timely and accurate information in order to avert any mistake in receiving requested orders.

On the other hand, the shortage in the administrative structure of Peyman causes deficiencies in communication and transferring information. This explains Razak’s dissatisfaction with effectiveness of communication. Based on my understanding, the supplier’s administrative structure has not been shaped for a two-way communication e.g. lack of using e-mail that is not compatible enough to receive orders, set a production schedule, response to requests timely and accurately etc. These types of weaknesses hinder the effectiveness of mutual communication and thus the SD.
## Dyad III – Razak and Peyman Companies

<table>
<thead>
<tr>
<th>SD Success Factors</th>
<th>Perspective of Razak as the Buyer</th>
<th>Comments</th>
<th>Perspective of Peyman as the Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Buyer-specific</strong></td>
<td>The Buyer</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Long-term Strategic Goals</strong></td>
<td>- Flexible delivery, high quality, cost reduction and capabilities improvement of the supplier</td>
<td>Similar views</td>
<td>- The buyer’s effort for performance and capabilities improvement of the supplier</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Achieving superior customers’ creation of the buyer</td>
</tr>
<tr>
<td><strong>Top Management Support</strong></td>
<td>- Allocating resource to the supplier’s e.g. machineries, material, factory site, warehouse</td>
<td>Similar views</td>
<td>- Allocating resource to the supplier’s capabilities and knowledge</td>
</tr>
<tr>
<td><strong>Power Influence Strategy in SD</strong></td>
<td>- The buyer has influence through information exchange, promise, threat and legalistic pleas</td>
<td>Conflicting views</td>
<td>- The buyer’s seriousness, promise, encouragement and pressure</td>
</tr>
<tr>
<td><strong>Buyer Commitment</strong></td>
<td>- Considerable investments</td>
<td>Similar views</td>
<td>- The 5-year contract with the buyer</td>
</tr>
<tr>
<td></td>
<td>- Commitment to the contract</td>
<td></td>
<td>- Investments in the supplier’s</td>
</tr>
<tr>
<td><strong>Supplier-specific</strong></td>
<td>The Buyer</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Supplier’s Expectations in its Strategic Objectives</strong></td>
<td>- Increase of market share</td>
<td>Conflicting views</td>
<td>- Survival in fast growing market</td>
</tr>
<tr>
<td></td>
<td>- Capabilities improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Conformity of supplier’s Capabilities</strong></td>
<td>- Investment by the supplier</td>
<td>Similar views</td>
<td>- Investment as the supplements to the buyer’s investments</td>
</tr>
<tr>
<td></td>
<td>- Learning session to increase the knowledge</td>
<td></td>
<td>- Considerable attempt to get the quality standards</td>
</tr>
<tr>
<td></td>
<td>- Gaining quality standard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplier’s Commitment</td>
<td>The Buyer</td>
<td>Comments</td>
<td>The Supplier</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------</td>
<td>--------------</td>
</tr>
<tr>
<td>- The contract, observation and verifiers force the supplier to be committed</td>
<td>Conflicting views Not an enabler</td>
<td>- Attempt to commit to the contract - Attempt to commit to the buyer’s investment</td>
<td></td>
</tr>
<tr>
<td><strong>Buyer-supplier Interface</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge Sharing and Transfer</td>
<td>- Sharing quality know-how according to EN 840-5 - Sharing experience</td>
<td>Similar views</td>
<td>- Sharing material information - Sharing experience</td>
</tr>
<tr>
<td>Trust</td>
<td>- Control is a mean to trust</td>
<td>Conflicting views Not an enabler</td>
<td>- Loyalty to the buyer - Openness in cost and financial data for the buyer - Permission of verifying by the buyer</td>
</tr>
<tr>
<td>Communication Methods and Effective Communications</td>
<td>- Fax, face-to-face meetings and telephones contact - Delay in sending proper response from the supplier - Non-organized structure in administration of the supplier</td>
<td>Conflicting views Not an enabler</td>
<td>- Telephone, face-to-face meetings and fax contact - Effective and two-way communication (volume, openness, accuracy, frequency and credibility)</td>
</tr>
<tr>
<td>Long-term Commitment</td>
<td>- Willingness to continuous relationship - The investment in the supplier</td>
<td>Similar views Not an enabler</td>
<td>- Willingness to continuous relationship - Both investments in the supplier - Keeping the written and verbal promises - Both transparency in the business - Not opportunistic usage of shared information by both</td>
</tr>
</tbody>
</table>

Table 5.8: Summary of the views on Success Factors of SD in Dyad III  
Source: Own Creation
The supplier believes in its commitment to the SD program while the buyer’s perception is not similar. The risk of using investments, material and shared knowledge opportunistically indicates why Razak limits the supplier by means of restrict contract, observation and verifiers. The opinion of the buyer in respect of opportunistic usage of resource and transferred knowledge as well as non-effective communication with Peyman hinders achieving reciprocal long-term commitment.

Additionally, the buyer does not fully trust Peyman and consider this shortage as a barrier to the present SD program. Razak faces uncertainty if Peyman may shift to other competitors. This fear is originated in the buyer’s invested resources and knowledge in the supplier that cannot afford to lose. Razak use the supplier’s weaknesses to lead the relationship and puts a lot of attempts to manage the relationship by means of controls and pressure to prevent further problems which take considerable time and energy from the buyer. However, Peyman believes in the buyer’s trust in itself and exemplifies it through its openness in required information and financial issues. However, it can be interpreted that the supplier does not have any other choice except to be open; otherwise, it may lose the considerable supports that is received from Razak. Thus, the supplier’s behavior which occurs because of fears to lose or the buyer’s control cannot indicate the mutual trust.

### 5.1.3.3. Barriers to Supplier Development in Dyad III

Referring to Table 5.9, the barriers of the SD program in this dyad are illustrated according to each company’s perspective. It reveals three different areas; the pitfalls that might initiate from the buyer’s side, the hindrances to the SD program that could derive from the supplier’s and finally the interface barriers (See Figure 3.1, the red parts). Some of the factors are barriers to the SD program according to the dyadic perspective. Furthermore, in some parts, the viewpoint of Razak and Peyman differs.

According to Razak, it pays ample attention to the supplier, even though the buyer has other larger suppliers in terms of annual sales volume. In return, Peyman’s perception is the same which can be seen through its acknowledgement of big and small orders. The considerable amount of investments especially direct investments in the supplier obviously explains why Razak cares the supplier considerably.
## Dyad III – Razak and Peyman Companies

<table>
<thead>
<tr>
<th>SD Barriers</th>
<th>Perspective of Razak as the Buyer</th>
<th>Perspective of Peyman as the Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Buyer-specific</strong></td>
<td>The Buyer</td>
<td>Comments</td>
</tr>
<tr>
<td>Lack of Buyer’s Top Management Support</td>
<td>- Nothing</td>
<td>Similar views</td>
</tr>
<tr>
<td>- The buyer’s seriousness to follow EN840-5 standards</td>
<td></td>
<td>Not a barrier</td>
</tr>
<tr>
<td>- Quality test before and after delivery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Purchase from alternatives due to supplier’s shortage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The buying firm’s Credibility to its Supplier</td>
<td>- The buyer’s seriousness to follow EN840-5 standards</td>
<td>Similar views</td>
</tr>
<tr>
<td>- Quality test before and after delivery</td>
<td></td>
<td>Not a barrier</td>
</tr>
<tr>
<td>- Purchase from alternatives due to supplier’s shortage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bias-related Barriers</td>
<td>- 80 % of purchase from this supplier</td>
<td>Similar views</td>
</tr>
<tr>
<td>- Maximum attention due to investments</td>
<td></td>
<td>Not a barrier</td>
</tr>
<tr>
<td>The Buying Firm’s Effectiveness</td>
<td>- SD is effective for the supplier</td>
<td>Similar views</td>
</tr>
<tr>
<td>- The supplier’s market share, sales volume, production capacity increase</td>
<td></td>
<td>Not a barrier</td>
</tr>
<tr>
<td>Misguided SD Objectives</td>
<td>- SD objectives (quality importance) are not perceived correctly by the supplier</td>
<td>Conflicting views</td>
</tr>
<tr>
<td>- Convincing the supplier about quality-related issues</td>
<td></td>
<td>Not a barrier</td>
</tr>
<tr>
<td>The buyer’s Reluctance to SD</td>
<td>- The supplier does not show enough motivation to continuous improvement</td>
<td>Conflicting views</td>
</tr>
<tr>
<td>- Convincing the supplier is time and energy consuming</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplier-specific</td>
<td>The Buyer</td>
<td>Comments</td>
</tr>
<tr>
<td>The supplier’s Lack of Commitment</td>
<td>- Disloyalty risk from the supplier</td>
<td>Conflicting views</td>
</tr>
<tr>
<td>- Giving the priority to other customers order by the supplier</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Low attention to the quality of products by the supplier</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Delays in answer to the feedback by the supplier</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insufficient Supplier Resource</td>
<td>- Not an ideal supplier but better than others</td>
<td>Similar views</td>
</tr>
</tbody>
</table>
| The Supplier Complacency | Evaluation and feedback reports are sent frequently from the buyer | Similar views | - Evaluation and feedback reports of each delivery are sent frequently from the buyer  
- No mechanism to measure the buyer’s satisfaction |
| --- | --- | --- | --- |
| The supplier’s Reluctance to SD | Unwillingness to invest more resource, time and energy  
- Supplier’s reluctance to realize SD objectives  
- The supplier has achieved its objectives | Conflicting views | - Reluctance to realize SD objectives |
| **Buyer-supplier Interface** | **The Buyer** | **Comments** | **The Supplier** |
| Lack of Trust | - The probability to shift to other buyers in the SC | Conflicting views | - Nothing |
| Insufficient Inducements to the Supplier | - Placing orders in economic recession periods in Iran  
- Make the supplier understand the supportive behavior of the buyer  
through promise, purchase volume | Similar views  
Not a barrier | - The buyer’s promise to extend the contract |
| Poor Alignment of Organizational Cultures | - Nothing | Similar views  
Not a barrier | - Nothing |
| Poor Communication and Feedback | - Difficulties to receive an on-time and accurate response and feedback from the supplier  
- Lack of ample capacity to process the shared information in the supplier’s and respond properly | Conflicting views | - Nothing |
| Power Related Issues | - The buyer has the power in negotiation due to its investments, size and purchase volume | Similar views | - Unilateral manner of the contract in favor of the buyer  
- The buyer has the power in negotiation |
| Lack of Profitability | - Profitable for both parties  
- The buyer usually receives produces according to expected quality and quantity  
- The supplier achieves considerable sales volume  
- The supplier has improved its capabilities | Similar views  
Not a barrier | - Profitable for both parties  
- The buyer usually receives produces in good condition (quality, delivery time and quantity)  
- The supplier’s improvement in capabilities and performance |
| Risk of Losses | - Fears to lose the investment, shared technical knowledge  
- Inevitable costs if there is need to shift to another supplier | Conflicting views | - Fears to lose the sales volume if the relationship corrupts  
- Cost and time consuming to attract new customers in the SC |

Table 5.9: Summary of the views on Barriers to SD in Dyad III  
Source: Own Creation
Razak expresses the SD’s goals clearly in order to make the relationship progress transparent and get the benefit of invested resource while the supplier perceives the stated objectives wrongly e.g. the importance of quality is interpreted as too much sensitivity. According to Razak’s view, the supplier is not willing to understand the SD objectives. It might be originated in Peyman’s organizational strategic goals since the supplier’s targets have already been accomplished e.g. sales volume increase. Hence, this differentiation in views inclines the buyer not to spend more time and energy to convince and inform the supplier in respect of important issues of the SD program. This hampers the appropriate progress of relationship and alignment of the SD objectives. In my view, the buyer has stopped in a degree of attempts and tries to reduce those factors that could make the situation worse.

As foreshadowed briefly in the section of success factors of ‘Dyad III’, lack of supplier's complete loyalty is always probable which is felt through manipulation of priority of Razak’s orders and the risk associated with using the buyer’s materials opportunistically. Although both parties illustrate their willingness to have a long-term partnership, it can be interpreted that they do not come to joint gentleman agreement and similar view in the relationship. The detailed contract is the sign of the buyer’s fear in respect of Peyman’s commitment.

Furthermore, lack of commitment to quality and feedback is perceived by Razak as a hindrance to the present SD program while the supplier often considers its commitment to the SD. This might be because of the differentiation between the supplier’s strategic goals and the present SD objectives. Also it can be noted that the supplier is under Razak’s severe observation to follow commitment’s criteria such as material control, quality inspections request of cost production reports etc.

For the same reason discussed above the supplier’s reluctance to spend more energy, time and financial resource can be explained although Peyman claims there is ample willingness for the present SD.

Razak’s investments in the supplier, its ownership of large percentage of Peyman’s sales as well as financial resource are the main factors that put the buyer in a stronger negotiation position. According to the collected data, usually Razak assigns terms and conditions which cause an unbalanced relationship in which the supplier suffers from the unilateral manner of the relationship.
All invested assets (tangible and intangible) create a risk condition for the buyer to lose the irretrievable investments if the relationship terminates unpredictably. The buyer does not want to waste the invested financial resources and transferred knowledge and thus concentrates on this supplier to get the benefit of the investments. All transferred knowledge associated with quality standards and production know-how brings vulnerability since it will be costly if Peyman leaves the relationship. In turn, the supplier also loses gained sales volume and faces costs of reentering to the market if the relationship is discontinued.

5.2. Cross Case Analysis (B and B*)

With help of dyadic views obtained in the within-case analysis, this section focus on investigating the differences and similarities in three dyads in order to connect the findings with the theoretical framework explained in Chapter 3.

5.2.1. Supplier Development Practices in Dyad I, Dyad II and Dyad III

In this section, the dyadic perspective of three cases in respect of the practices that are applied in their SD programs is studied. Furthermore, in the scope of reviewed literature, the empirical evidence is investigated.

‘Dyad I’ has started the trial SD activities in order to minimize the level of defects in the packaging line which had potential damages to the actual products i.e. received materials. This is affirmed by Shokri et al. (2010) who state that the root of non-conformances and complaints could be laid in the poor packaging system. One of the main activities done by Baharestan is its relationship-specific investment in molds and equipment on behalf of the supplier (Wagner, 2010). The initial SD version resulted in packaging improvement but it was costly in other aspects for the buyer e.g. recollecting the pallets from Petrochemical Company’s customers. These activities have been expanded and modified to gain more profits and reduce the bottlenecks in operations. Thus, operational and financial performance improvement for the supplier is achieved (Arroyo-López et al., 2012; Shokri et al., 2010; Wagner, 2006a). In addition, the buyer reaps the benefits of cost reduction in the production line (Wagner, 2010).
‘Dyad II’ has started the SD program in order to increase the supplier’s capacity, achieve more compatibility with demands and quality improvement based on international standards. Having the machinery supplier as a close partner is the target Baharestan to attain the long-term competiveness in the market. This partnership has been constructed by creating a cooperative atmosphere and support of the foreign supplier to enter the domestic market. This requires specific knowledge sharing, market studies and material improvement to coordinate the new established joint action successfully. Establishment of long-term relationship and strategic knowledge sharing are also highlighted by Shokri et al. (2010).

‘Dyad III’ has begun the SD activities through Razak’s acknowledgment of its competent supplier in order to improve capabilities, production capacity and performance of the supplier. Preliminary idea to manufacture the components by Razak itself was rejected according to respective manufacturing and labors costs (Gunther and Wagner, 2012). Therefore, developing one of the competent and potential suppliers in the SC is regarded as an appropriate alternative for Razak to receive satisfactory subassemblies. This choice is also recommended by Nagati and Rebolledo (2013) who assert that the SD program provides the opportunities for supplier to upgrades their capabilities. Wu et al. (2011) and Ghijesen et al. (2010) demonstrate that the current supplier’s competence improvement through combining firm-specific assets results in competitive advantages for both parties. Thus, the productivity of the supplier increases which in turn requires resource dedication to the supplier by the buyer (Wagner, 2010).

In all three dyadic cases, the buying firms have started the respective SD efforts by recognizing the suppliers and the supplying items critical for the business, the potential of the suppliers to be developed and return on investments that are affirmed by Krause et al. (1998).

According to aforementioned stories it is revealed why each dyad is begun the SD efforts. It can be noted that despite of ‘Dyad I’, the second two dyads tend to use SD as a strategic approach (long-term benefits achievement) rather than reactive tool (present problem solving). This is supported by Hahn et al., (1990) who state that upgrading existing supplier’s capabilities can be regarded as a broad perspective of SD. Although Krause et al. (1998) add to their discussion that the strategic approach is deployed on
the supplier base rather than self-section of deficient supplier and focuses on continues improvement of the entire SC.

‘Dyad III’ exemplifies the proactive philosophy that is introduced by Krause and Ellram (1997a). Since, the proactive firms expect higher levels of quality from the suppliers, to achieve this goals Razak has started to use combination of SD activities by highly involvement in its supplier’s deficiencies in order to improve those insufficiencies affect the long-term success of the buying firm’s objectives.

Interestingly, the buying firm in ‘Dyad I’ and ‘Dyad II’ is the same i.e. Baharestan. This means Baharestan’s strategy associated with SD efforts differs from one supplier to another supplier. This is not justified with Krause’s et al. (1998, p. 54) statement who mention that “companies tend to use supplier development either as a strategic tool or a reactive tool”. The differentiation in using SD as the strategic tool for one supplier and the proactive approach for another one might illustrate different influencing power of Baharestan as the buyer to different suppliers in the SC.

As Krause et al. (1998) mention, the strategic approach is highly demanding in terms of reciprocal deployment of resources. Therefore, as long as the buyer cannot attract the supplier for allocating its organizational resources that is also emphasized by Wouters et al. (2007) reaching the strategic atmosphere for SD practices is not easily feasible. In this respect, it can be mentioned that why the buyer of ‘Dyad I’ and ‘Dyad II’ follows different paths to improve its supplier’s performance and/or capabilities in the SC.

As is shown in Table 5.10, in ‘Dyad III’ the competitive pressure, exchange of personnel and buying from an alternative supplier, are applied on the contrary to the remaining dyads. The supplier of ‘Dyad III’ is under pressure of bids and threatened by other suppliers’ prices in order to reach Razak’s requirements. Furthermore, the same products are bought from alternative suppliers which may indicate the inability of supplier to accomplish the orders or its unreliability in the eyes of its buyer. Since the buyer points out that its supplier has still shortage to meet the big orders.

Razak tries to push its supplier to improve the performance and capabilities to make the business relationship effective. By creating a competitive condition, the supplier might be motivated to meet the buyer’s demands. In other words, Razak tries to keep the supplier “on its toes” (Lascelles and Dale, 1991, p. 47).
## Supplier Development Practices

<table>
<thead>
<tr>
<th>SD Practices</th>
<th>Dyad I</th>
<th>Dyad II</th>
<th>Dyad III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitive pressure</td>
<td>--</td>
<td>--</td>
<td>- Bidding</td>
</tr>
<tr>
<td>Supplier evaluation</td>
<td>- Random quality test after delivery</td>
<td>- Technical tests during production</td>
<td>- Quality tests during production</td>
</tr>
<tr>
<td>Buying from a limited number of suppliers per purchased item</td>
<td>--</td>
<td>--</td>
<td>- Quality tests during production according to witness sample</td>
</tr>
<tr>
<td>Raising performance expectations</td>
<td>- Shorter delivery time</td>
<td>- Shorter delivery time</td>
<td>- Shorter delivery time</td>
</tr>
<tr>
<td>Communication and feedback</td>
<td>- Regular contacts with sales Dep.</td>
<td>- Regular contact of employees with the supplier’s sales Dep. of main office and its agent in Iran</td>
<td>- Frequent contacts on warehouse level</td>
</tr>
<tr>
<td>Knowledge Transfer</td>
<td>- Technical information sharing by the buyer (sometimes)</td>
<td>- Technical requests rather than information sharing by the buyer</td>
<td>- Technical, process, machine functioning standards</td>
</tr>
<tr>
<td>Recognition</td>
<td>--</td>
<td>- Advertisements</td>
<td>- On-site consultation and exchange of technical knowledge</td>
</tr>
<tr>
<td>Supplier incentives</td>
<td>- Extending the contract</td>
<td>- Support the supplier in Iran market</td>
<td>- Extending the contract</td>
</tr>
</tbody>
</table>

### Notes
- **Dyad I**:  
  - Random quality test after delivery  
  - Quantity control  
- **Dyad II**:  
  - Technical tests during production  
  - Technical tests before delivery  
- **Dyad III**:  
  - The buyer has four alternative suppliers  
  - Shorter delivery time  
  - Better quality  
  - Flexible delivery  
  - Frequent contacts on warehouse level  
  - Frequent contact of both top management  
  - Feedback of quality evaluation  
  - Technical, process, machine functioning standards  
  - New subjects about material information sharing  
  - On-site consultation and exchange of technical knowledge of both parties’ engineers  
  - Friendly launch  
  - Giving gifts to the supplier’s hard workers  
  - Extending the contract  
  - Promise of 100 % purchase from this supplier
<table>
<thead>
<tr>
<th><strong>Site visit</strong></th>
<th><strong>Recommendation &amp; persuading other factories</strong></th>
<th><strong>Long-term contract</strong></th>
<th><strong>Technical assistance in improving suppliers’ parts and materials</strong></th>
<th><strong>Expectation of Supplier’s certification</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>--------------</td>
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</tr>
<tr>
<td>Site visit</td>
<td>Inspection before assembling</td>
<td>Long-term contract</td>
<td>Technical assistance in improving suppliers’ parts and materials</td>
<td>Expectation of Supplier’s certification</td>
</tr>
<tr>
<td>Long-term contract</td>
<td>Extend the 5-year contract to a 10-year</td>
<td>The 5-year contract</td>
<td>Technical assistance in improving suppliers’ parts and materials</td>
<td>Expectation of Supplier’s certification</td>
</tr>
<tr>
<td>Technical assistance in improving suppliers’ parts and materials</td>
<td>Technical suggestions for components improvement and changes</td>
<td>Technical suggestions for components improvement and changes</td>
<td>Designing the mold of some plastic components</td>
<td>Technical advice to improve material quality</td>
</tr>
<tr>
<td>Expectation of Supplier’s certification</td>
<td>CE standard</td>
<td>ISI standard</td>
<td>EN-840-5 standard</td>
<td>Sharing all available technical information</td>
</tr>
<tr>
<td>Intensive information sharing</td>
<td>Sharing all available technical information</td>
<td>Sharing all available technical information</td>
<td>Sharing all available technical information</td>
<td>Sharing all available technical information</td>
</tr>
<tr>
<td>Training and education of a supplier’s personnel</td>
<td>Production process information</td>
<td>Production process information</td>
<td>Production process information</td>
<td>Production process information</td>
</tr>
<tr>
<td>Exchange of personnel between the two firms</td>
<td>Receive polymeric news, prices, technical information</td>
<td>Receive polymeric news, prices, technical information</td>
<td>Receive polymeric news, prices, technical information</td>
<td>Receive polymeric news, prices, technical information</td>
</tr>
<tr>
<td>Supplier involvement in the buyer’s NPD and development</td>
<td>Mold design suggestions in NPD</td>
<td>Mold design suggestions in NPD</td>
<td>Mold design suggestions in NPD</td>
<td>Mold design suggestions in NPD</td>
</tr>
<tr>
<td>Direct investment in a supplier by buyer</td>
<td>Receiving advice and comments in designing NPD</td>
<td>Receiving advice and comments in designing NPD</td>
<td>Receiving advice and comments in designing NPD</td>
<td>Receiving advice and comments in designing NPD</td>
</tr>
<tr>
<td>Source: Own creation</td>
<td></td>
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</tbody>
</table>
Moreover, as mentioned in Section 4.3.1, it can be assumed that the buyer is insecure to lean on this supplier thoroughly associated with quality standard considerations and using 100 % virgin material in the production. Having verifiers in the supplier’s factory also affirms this which brings the opportunity to monitor the quality of the products. These kinds of mistrust, fear, dishonesty are also declared by Lascelles and Dale (1991) as the results of competitive pressure on the supplier.

Raising performance expectation associated with higher level of quality is regarded as the proactive philosophy of buying firms by Krause and Ellram (1997a). In general, all three cases reveal their expectations of performance by stating the need for better quality and delivery time. This means, quality products and on-time deliveries are important for the buying firms of the three dyads in different aspects. It is noticeable that the material and items supplied depend on one another like different gears in a machine. If there is a deficiency in one and/or the requested items arrive late, it definitely will affect the function of others and thus it hinders the quality and on-time production of the finished products. The mentioned issue obviously explains why quality and on-time delivery are important to expect from all different suppliers.

The link between material, components, parts and finished products also clarifies the suppliers’ involvement in the buyers’ NPD which is one the advanced SD practices defined by Sánchez-Rodríguez et al., (2005). The supplier in ‘Dyad I’– supplier of material and ‘Dyad II’– supplier of machineries have to observe the injection mold designs in order to reach the maximum level of compatibility with material, machineries and the mold. Consequently the buyers can succeed quality products and deliver value to their own customers in the end.

However, there is no need to involve the supplier of the last dyad i.e. ‘Dyad III’ in NPD of the buyer due to the nature of the supplying items i.e. subassemblies which do not affect the production process of finished products (injected plastic parts).

It should be noted that the involvement of Petrochemical Company in the buyer’s NPD process in ‘Dyad I’ is on the contrary to Sánchez-Rodríguez’s et al., (2005) statement based on requiring strong inter-firm relationship and intensive information exchange between partners. Since, according to empirical evidence, the communication in this dyad is formal and there is no room to exchange internal information broadly.
In all three cases, communication is frequent and demands, orders, expectations and feedback are shared through fax, telephone, email, face-to-face meetings and discussions which Shokri et al., (2012) and Carr and Kaynak (2007) classified them into traditional methods.

In ‘Dyad I’ and ‘Dyad II’, communication is conducted through the supplier’s sales office while in ‘Dyad III’ it is conducted through personnel of each division. However, the situation in ‘Dyad I’ is different. The relationship and hence the communication between counterparts are formal due to the governmental structure of the supplier compared to the other two suppliers who are from the private sector. For that reason, frequent meetings and discussions of both top managements cannot be held that often in ‘Dyad I’.

All three dyadic cases are involved in knowledge sharing; however, the intensity and types of transferred knowledge are different according to the context of relationships. It is interesting that almost all suppliers transfer higher level of technical knowledge compared to the respective buyers. This might stress the fact that the buyers are facing lack of knowledge in technical issues. The buyers are likely to submit technical requests or suggestions rather than transferring knowledge. This means they transfer the desired results which are expected to be gained in the end. Inviting the relevant personnel of the suppliers to have on-site visits is one of the routines that all dyads prepare to represent the suggestions and discussions. The suppliers in turn capture the wishes to improve the material and components quality etc. to meet the buyer’s requirements. According to previous discussion in section 5.1.3.1 and Chapter 4, in ‘Dyad III’ the intensity of shared knowledge by the buyer is a little higher than the first two dyads. The sharing knowledge in this dyad is in the shape of quality instructions due to the supplier’s shortage in some sort of know-how to follow quality standards.

The intensity of shared information is influenced by the issues that mentioned in the above discussion. To some extent, in all dyadic cases, the technical information is limited to production process information as well as production experiences. However, due to the closer relationship in ‘Dyad II’ i.e. reciprocal shares in Iran agent and relation-specific investments (Wagner, 2010) in ‘Dyad III’ i.e. asset investments and delivering some sort of raw material to the supplier; the financial and accounting, components prices and production cost information are shared by the suppliers too.
Technical assistance of the buyers in all three dyads follows the structure same as knowledge transfer and information sharing. Based on the level of knowledge position of the buying firms as the producer of finished products; technical support is in the form of sharing experience associated with production process. For instance, although the buyer in ‘Dyad III’ has designed one of the component molds for Peyman, Razak’s technical assistance is based on presenting desired expectations and technical suggestions for material improvement and quality of final assemblies. All buying firms of three cases assist the suppliers to achieve technical needs through discussion, sharing experience and presenting suggestions. So, the suppliers modify the material, parts and components etc. due to the proposals to meet the targets.

According to Wagner (2010) and Krause’s et al. (2000) definition of direct SD (active role to invest in the suppliers) and indirect SD (investing no or limited resources in the suppliers), it can be considered that all three dyadic cases involved in both types of SD. Generally, all three cases have the following indirect SD activities in a similar manner; request, formal agreements, supplier evaluation and supplier incentives (promise, recommendation and product confirmation etc.).

Simultaneously, all three dyads are involved in some direct SD activities such as knowledge transfer and inviting supplier’s personnel; however in different ways and less than the indirect SD practices in each dyad. For instance, direct investment in the supplier of ‘Dyad III’ is applied while in ‘Dyad I’ the buyer conducts relation-ship specific investment on behalf of the supplier. In ‘Dyad II’ customization of product by the supplier on behalf of the buyer can be mentioned (Wagner, 2010).

According to the represented stepwise model in Section 3.1.4 and with help of abovementioned table of practices, it could also be realized that all three cases are engaged in all three stages in respect of the buyer’s involvement in different SD practices. This clarifies the position of the buyer of each dyad according to low, moderate and high level of involvement in the SD practices.

It is interesting to mention that all buyers are in three levels- from low to high level of buyer’s involvement simultaneously. In this regard, according to the stepwise model of SD practices (see Figure 3.2), it is worth noting that the buyers can keep those activities related to low level of involvement and go forward to the higher level of involvement.
For instance, in ‘Dyad I’ the buyer evaluates Petrochemical Company’s performance while the long-term contract exists and the relationship-specific investments are applied by Baharestan on behalf of the supplier. These investments can be regarded as providing mold and equipment for producing pallets for the supplier’s packaging line.

Baharestan in ‘Dyad II’ still requests for better performance associated with quality while Tederic is involved in the buyer’s NPD or allocates the appropriate investments for customization of the machineries. ‘Dyad III’ same as the first two dyads has low buyer’s involvement activities such as supplier performance evaluations and Razak buys the same items from the limited suppliers while the buyer deploys direct investments as well e.g. purchasing machineries and material for the Peyman.

5.2.2. Success Factors of Supplier Development in Dyad I, Dyad I and Dyad III

In this section the dyadic perspective of three cases in respect of those factors contribute to the success of SD program in the scope of reviewed literature (Chapter 3, Section 3.1) is discussed.

- **Buyer-specific Success Factors**

  **Long-term strategic goals:** As is shown in Table 5.11, all dyadic cases have defined the long-term strategic goals for the present SD programs. This is noted by Humphreys et al. (2004) that the transparent long-term goals in the relationship motivate the effectiveness of SD. ‘Dyad II’ and ‘Dyad III’ emphasize on improvement of their suppliers’ capabilities in order to achieve the performance improvement. The aim for ‘Dyad II’ is reaching European standard in production and increase the capability of Tederic to increase the flexibility as well as to produce heavy machineries. ‘Dyad’s III’ focus is on the increase of production capacity along with standard quality to gain the flexibility and thus better delivery time and cost reduction.

  It is consistent with Arroyo-López’s et al. (2012) emphasis on considering the SD as a process i.e. concentration on future capabilities rather than current quality and cost. Since, the long-term SD programs facilitate permanent improvements through capabilities improvement. The performance improvement i.e. delivery time, cost reduction and quality is achievable consequently.
## Supplier Development Success Factors

<table>
<thead>
<tr>
<th><strong>Buyer-specific</strong></th>
<th><strong>Dyad I</strong></th>
<th><strong>Dyad II</strong></th>
<th><strong>Dyad III</strong></th>
</tr>
</thead>
</table>
| **Long-term Strategic Goals** | - No defected packaging  
- High quality of material according to order  
- Defining new project for packaging system | - Improve the supplier’s performance and capabilities to achieve European standards | - Flexible delivery, high quality, cost reduction through capabilities improvement |
| **Top Management Support** | - Awareness of the benefits of the SD  
- Willingness to more collaboration  
- Meet the supplier’s requirements in the contract  
- Investments in new equipment and laboratory | - Awareness of the benefits of the SD  
- Willingness to longevity of the relationship  
- Investments in the supplier’s agency in Iran | - Allocating resource to the supplier’s capabilities and knowledge  
- Seriousness, promise, encouragement and pressure |
| **Power Influence Strategy in SD** | - Power influence by information, recommendation, promise and request | - Influence through information exchange, promise, threat and legalistic pleas |
| **Buyer Commitment** | - Investment in packaging system exclusively for the supplier  
- Commitment to the contract  
- Presenting willingness to the collaboration | - Keeping verbal and written promises  
- Consider the supplier as a partner  
- Supportive behavior  
- Sharing the key information of the market  
- Investment in the supplier’s agent in Iran | - Considerable investments  
- Commitment to the contract |
| **Supplier-specific** | **Dyad I** | **Dyad II** | **Dyad III** |
| **Supplier’s Expectations in its Strategic Objectives** | - No pre-set plan  
- Increase of supplier’s customers’ satisfaction  
- Improvement of the supplier’s performance  
- The supplier’s reduction in packaging cost and waste | - Increase the supplier’s market share  
- Recognize the Middles East market preference through Iran  
- Capabilities improvement | - No pre-set plan  
- Increase of market share  
- Capabilities improvement |
| **Conformity of supplier’s Capabilities** | - Material quality improvement  
- Compatible material with finished products | - Supplier’s investments in its equipment, human resource etc. | - Investment as the supplements to the buyer’s investments  
- Learning session to increase the knowledge  
- Gaining quality standard |
| **Supplier’s Commitment** | - Commitment to packaging contract  
- Low commitment to required raw material order | - The supplier’s loyalty  
- Relationship growth  
- The supplier’s investments in its capabilities | - |
<table>
<thead>
<tr>
<th><strong>Buyer-supplier Interface</strong></th>
<th><strong>Dyad I</strong></th>
<th><strong>Dyad II</strong></th>
<th><strong>Dyad III</strong></th>
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</table>
| **Knowledge Sharing and Transfer** | - On-site visit of the supplier’s personnel  
- Production experience sharing to the supplier  
- Receiving advice in mold design for material compatibility  
- Sharing new issues of plastic industry by the supplier  
- Sharing technical information and manuals for better material treatment by the supplier  
- Sharing other manufacturers’ experience associated with know-how of using material properly by the supplier  
- Receiving information, problems and modification advice of raw material from the buyer | - Sharing experience of production process  
- Sharing technical and general information e.g. material, water, electricity types in Iran  
- Sharing Iran market information and preferences  
- Sharing experience of production process by the buyer  
- Sharing technical information by the supplier  
- Sharing know-how of machineries operation by the supplier  
- Preparing operational manuals by the supplier  
- Sharing received experience from others with the buyer | - Sharing quality know-how according to EN 840-5  
- Sharing experience by both  
- Sharing material information by the supplier |
| **Trust** | - No verifiers in both sides  
- Tall hierarchical structure of the supplier | - Openness in financial and cost information by the supplier  
- Payment flexibility and giving credits by the supplier  
- Honesty of both parties  
- High sharing of intensive market and competitors information by the buyer | - |  

<table>
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<tr>
<th><strong>Communication Methods and Effective Communications</strong></th>
<th><strong>Dyad I</strong></th>
<th><strong>Dyad II</strong></th>
<th><strong>Dyad III</strong></th>
</tr>
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</table>
| - E-mail, fax and telephone  
- Regular meeting with the supplier agency in Iran  
- Face-to-face meetings with top management  
- Ad hoc meetings of both engineers  
- No need to wait for the supplier’s response | - | - | |

<table>
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<tr>
<th><strong>Long-term Commitment</strong></th>
<th><strong>Dyad I</strong></th>
<th><strong>Dyad II</strong></th>
<th><strong>Dyad III</strong></th>
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**Table 5.11: Summary of Success Factors of SD between the Three Dyads**

**Source:** Own creation
The situation in the ‘Dyad I’ is different in terms of objectives, since the buyer underlines its supplier performance more than capabilities improvement i.e. packaging system development. The buyer in ‘Dyad I’ does not have enough power, resource and influence to interfere to the supplier’s structure and thus the capabilities improvement is difficult to reach. In this respect, the buyer’s attempts concentrates on identifying the performance weaknesses and presenting the solution to reach better quality and timely deliveries.

Baharestan’s low polymeric knowledge, shortage of its financial resources as well as supplier’s dominance-related issues makes it difficult for the buyer to focus on the developing its supplier’s future capabilities. In this regard, Baharestan takes the necessary actions for the supplier’s performance improvement in a form of relationship-specific investment on behalf of Petrochemical Company to achieve the expected requirements (Wagner, 2010). The projects that the buyer tends to invest for Petrochemical Company is the symptom of the long-term outlook to the present relationship; despite it is not supported by the concept of SD as the process (Arroyo-López’s et al., 2012).

**Top management support:** Krause (1999) emphasizes the importance of top management of the buying firm to initiate the SD program, support it and motivate involved parties in order to achieve successful SD. In scope of the three dyadic cases, supportive behavior of the buyer’s top managements is realized not only from the buyer’s perspective but also based on the suppliers’ perceptions.

In all dyads, top management of the buying firms declare that they are aware of the potentials that could be gained through the collaboration and present SD programs through their willingness to continue the relationship with the suppliers. Different types of investments and allocating firms’ resources for their suppliers and/or one behalf of the suppliers can be regarded as the symptoms of their acknowledgement. This encouragement from the top enables the whole engaged departments and personnel to use firms’ resources in their suppliers (Li et al., 2012; Humphreys et al., 2004).

**Power influence strategy in SD:** In ‘Dyad I’, the buyer cannot influence the supplier for change its performance considerably due to the same reasons that mentioned above such as dominance, sales percentage and size of Petrochemical Company and low polymeric knowledge, purchase volume and size of Baharestan compared to the supplier. Although
the supplier has changed the packaging system according to its Baharestan’s relationship-specific investments (Wagner, 2010) and efforts, this can be regarded as the supplier’s hunting behavior to achieve better performance to gain customer’s satisfaction in the entire SC not response to this specific buyer’s requests. Ghijsen et al. (2010) mention the indirect and direct influencing power such as information exchange and recommendation; request, promises, threats and legalistic please respectively. In this regard, Baharestan tries to attract the supplier and change the view of Petrochemical Company to improve the supplier’s performance by giving the appropriate information e.g. production process information or extending the contract. However, the effect of such influencing factors on the supplier cannot be regarded noticeably which confirmed by both partner’s views.

Influence-related issues in the second two dyads are different from the first one. In ‘Dyad II’, Baharestan leads the supplier to customize its capabilities and abilities based on the domestic market and the buyer’s demands (Wagner, 2010) through demonstrating its willingness to continue the present relationship and supportive behavior along with promises and request. This means the buyer, use direct and indirect influencing power (Ghijsen et al., 2010) not only to affect the supplier’s performance but also its capabilities. Consequently, the supplier itself would be attracted to concentrate on the improvements in order to gain more benefit lying in the reciprocal relationship. The perception of supplier is highlighted the collaborative atmosphere of the relationship which is based on willingness to longevity of the business (See Section 4.3.2.2). This means the influencing power are conducted in the context of cooperative relationship and joint actions which is on the contrary to Wagner’s (2010) statement that the influencing power focuses on coercive and/or non-coercive power rather than joint actions. Since, joint actions usually consist of the willingness and cooperation of both parties to be engaged without force and power of another side.

The changes in the supplier’s capabilities and performance of ‘Dyad III’ are applied same as ‘Dyad II’ but through a stronger buyer’s behavior such as threats and legalistic pleas. However, this does not mean that the buyer is not actively involved in Peyman’s development i.e. performance or/and capabilities improvement. The directed investment by the buyer in Peyman might be on the contrary to the idea that Wagner (2010) mentions which the influencing power is based on inactive manner of the buyer. Razak
mostly use its power to guarantee the potential benefits that could be reached from the invested resources in the supplier.

**Buyer commitment:** Commitment of buying firm to SD should be manifested through active involvement, investment and relationship development as Wu *et al.* (2011) point out. In this regards, it can be noticed that all three cases show their commitments to the SD and their suppliers through the investments that discussed above in top management support section. The willingness that all buyers illustrate and is confirmed by the suppliers also is the symptom of the buyers’ commitment. Furthermore, all dyads have the long-term contracts (five years above) which is regarded as another criterion of commitment that is mentioned by Krause and Ellram (1997b).

Keeping promises by the buyers encourages the suppliers to consider the relationship as a reliable and important collaboration which could bring benefits for both parties. This supportive behavior of buyers and involving suppliers to NPD of buyers are also highlighted by Ghijsen *et al.* (2012). However, supplier’s involvement in NPD which exist in ‘Dyad I’ and ‘Dyad II’ could not be regarded as a strategy to motivate the suppliers and exhibiting the buyer commitment. As discussed in section 5.2.1, the suppliers’ involvement in the buyer’s NPD is because of considerable need of Baharestan to make appropriate compatibility between material, equipment and machineries in order to manufacture the quality products.

- **Supplier-specific Success Factors**

**Supplier’s expectations in its strategic objectives:** According to the empirical evidence, it can be concluded that the suppliers in all three cases have strategic goals which are achievable in their SD efforts. These objectives are in an implicit manner in ‘Dyad I’ and ‘Dyad III’ and are not spoken directly by the respondents and they do not outline the clear objectives associated with the present SD. Both suppliers in these two dyads have not had pre-planned programs to improve their performance and/or capabilities through their buyer’s supports. This means the objectives and the long-term benefits that could be achieved through the reciprocal relationship were not clear for the suppliers before the establishment of SD. However, the progress of the relationships with their buyers, significantly contributes to identifying the specific expectations that might be gained through the joint actions. The gained mutual benefits in the relationships
demonstrate the effectiveness of SD efforts and therefore, it can be noticed that now the clear objectives do exist in these firms. Furthermore, it should be noted that the philosophical match which Humphreys et al. (2004) stressed cannot be considered in ‘Dyad I’ and ‘Dyad III’. Thereby, the strategic objectives differentiations could decrease the chance of success to some extent.

Whereas, the previous SD experience is a contributing factor for the supplier of ‘Dyad II’ to have the clear objectives and exceptions associated with the present SD and business with Baharestan. The opportunity to enter the new business territories is the main target of this supplier which causes considerable attention and attempts to align its capabilities for mutual future growth. This reinforces the strategic match in the dyad and as Humphreys et al. (2004) mention, improving the chances of success in the alliance increase.

**Conformity of supplier’s capabilities:** Sánchez Rodríguez et al., (2009) cite that supplying firm should focus on each customer priorities in order to meet the expected requirements of them. In the scope of three dyads, all the suppliers somehow attempt to match their capabilities with the buyers’ demands. ‘Dyad I’ provides with the quality material which are compatible with the buyer’s production line. ‘Dyad II’ invests in its capabilities and human resources in order to be matched with the preferences of domestic market and harmonize the machineries with material, geographical situation and molds. Finally ‘Dyad III’ has gained the quality standard according to Razak’s requests and purchased new machineries as the supplement to the buyer’s investments in order to conform to the expectations.

**Supplier’s commitment:** ‘Dyad II’ is enjoying the supplier’s commitment to the present SD program and partnership. The supplier’s commitment is shown by the willingness as well as the efforts to answer the requirements that are asked for in the long-term basis (Ghijsen et al., 2010) which is also stressed by Humphreys et al. (2011). The loyalty that the buyer perceives through receiving all prospects’ orders via Tederic to the Iran agent demonstrates the supplier’s willingness to a long-term relationship. Therefore, the mutual cooperation is created and contributes to successful SD (Prahinski and Benton, 2004).

Interestingly, the supplier in ‘Dyad I’ demonstrates its commitment to the present contract, which demonstrate the willingness to continue the relationship to some extent.
According to Krause (1999), it is important the buying firm perceive the evidence of the supplier’s commitment. In this respect, it can be mentioned that Baharestan perceives symptoms associated with some level of the supplier’s commitment i.e. material quality improvement and producing specific material for the packaging system. However, according to the buyer’s view, Petrochemical Company has lower commitment to the buyer’s requests and expectations associate with those issues excluding the formal agreement. It is affirmed by both partners of the dyad that this low commitment is not related to Petrochemical Company’s unwillingness to the relationship and development. The factors that are arising from the context of the relationship affect the commitment of the supplier negatively. These factors hinder the success of present SD and are discussed in the next Section 5.2.3. As Humphreys et al. (2011) mentions the lack of supplier’s commitment can hinder the willingness of the buying firm to assist the supplier to improve its performance. As said by Baharestan, the encouragement that the buyer has to SD is not reduced because of the shortage of the supplier’s commitment. It seems Baharestan realizes the present deficiencies are results of uncontrollable factors rather than lack of the supplier’s commitments.

➢ **Buyer-supplier Interface Success Factors**

**Knowledge sharing and transfer:** Knowledge transfer can be regarded as a contributing factor of the SD for all three dyads. All dyads share various types of knowledge but in different levels. According to Arroyo-López (2012), Wagner (2010) and Modi and Mabert (2007) knowledge is distinguished as two types; tacit and explicit knowledge which is explained in detail in Section 3.2.3.1. The transferred knowledge is the highest in ‘Dyad II’ followed by ‘Dyad I’ and ‘Dyad III’ respectively. In this regard, ‘Dyad II’ manifests knowledge sharing that ranges from transferring domestic market information, technical experience and know-how based on training, discussion and on-site consultation (tacit knowledge) to manuals and instructions e.g. machineries operation (explicit knowledge). Arroyo-López (2012), Wagner (2010) emphasize on those activities contribute to knowledge transfer which are conducted in ‘Dyad II’ such as training, inviting supplier’s personnel and on-site consultation.

These activities synchronize the joint improvements of the dyad to gain more compatibility and improvement to meet the buyer’s requirements and thus bring benefits
to the SD (Wagner and Krause, 2009). As a result, performance improvement could be created for the supplier which is stated by Hernández-Espallardo et al. (2010). Additionally the bilateral shares in the Iran agent is highly demanding in terms of transferring market information and preferences, competitors’ activities and respective prices which is severed by the buyer. Relevant and appropriate knowledge requires a means and routines to conduct between parties. Consequently, open-channeled communication discussed above contributes to the better common understanding level in the dyad and thus strengthens the knowledge transfer and information sharing. In addition, the transferred knowledge reinforces the competitive position of the supplier in domestic market and enables it to present superior values above competitors (Hernández-Espallardo et al., 2010; Sánchez Rodríguez et al., 2005).

In the ‘Dyad I’ the transferred knowledge is determined to the general information of specification and material operation from the supplier’s side and production experience (tacit knowledge) from the buyer’s side. The transferred knowledge to the supplier contributes to producing the material with better quality and compatibility for the production line of Baharestan. In addition, transferred knowledge regarding packaging system assists the supplier to decrease non-conformance material associated with poor packaging. These consequences are also demonstrated by Wagner (2010) and Wagner and Krause (2009). However, the limited knowledge sharing could be originated in the formal communication and defined level of relationship between partners.

Finally, transferred knowledge in the ‘Dyad III’ is narrowed to those types of know-how (tacit knowledge) and instructions (explicit knowledge) associated with quality standard in which Peyman is weak. Therefore, as Ghijsen et al. (2010) mention the lack of resources for improvement contributes the supplier to welcome supportive behavior of Razak. It should be noted that this weakness are more apparent in the early phase of the SD program. This type of knowledge sharing is conducted through on-site consultation and written instruction (Arroyo-López, 2012; Wagner, 2010). This increases supplier’s learning level to produce quality products as Ghijsen et al. (2012) outline. Furthermore, Peyman can achieve appropriate know-how to improve the abilities to manufacture and use new technology to distribute desired products (Arroyo-López, 2012).

The limited level of transferred knowledge in ‘Dyad III’ could be because of the nature of supplying product i.e. subassemblies that does not have considerable effect on the
buyer’s production process, functioning and compatibility between machineries, mold and material.

**Trust:** ‘Dyad II’ is enjoying the highest level of trust between three dyadic cases. Honesty and trustworthiness are in a good level in this dyad which leads to the flexible payment terms, allocating credits for purchasing items and openness in financial issues. According to Bagchi- Skjoett-Larsen (2003), the trust in the relationship increases collaboration, decision delegation and reduce irrational behavior. In this respect, trust in ‘Dyad II’ motivates the SD progress in the relationship (Nagati and Rebolledo, 2013) and contributes to the willingness of both parties to invest for improvement without hesitation. The lack of opportunistic behavior and thus safety to be open for another counterpart has changed the relationship’s face into friendship orientation in this dyad which is affirmed by Tomkins (2001) who emphasize the trade-off between knowledge sharing and trust. This is also stated by Wagner (2011) who underlines that trust between the partners builds up slowly from experience as the relationship progresses. In addition, Lawrence (2004) also stresses the partnership orientation of relationship due to trust growth.

As mentioned above in respect of knowledge sharing and information sharing, ‘Dyad II’ has the highest level among other dyads which demonstrate the existence of considerable degree of mutual trust and commitments to what should be done between partners (Wagner, 2011 and Zahng et al., 2011). The strong link between trust, intensity of information sharing and commitment are also noticed by Terpend et al. (2008), Nagati and Rebolledo (2013) and Ryu et al. (2009).

‘Dyad I’ demonstrates trust but not as strong as ‘Dyad II’. As discussed in Section 5.1.1.3, according to the hierarchical and government-oriented structure of supplier, the level of trust cannot be grown up more than defined level in the dyad. However, the present trust enhances the dyad to meet other’s requirements in the present SD properly. Eliminating on-site verifiers by both parties for instance speeds up the mutual communication, production process and declines respective paper work load. This behavior is mentioned by Humphreys et al. (2011) and Ryu et al. (2009) which contributes the dyad to create a non-opportunistic environment.

**Communication methods and effective communications:** As discussed in Section 5.2.1, the regular communication methods in all dyads are traditional methods (Shokri et al.,
2012 and Carr and Kaynak, 2007). Furthermore, in ‘Dyad I’ and ‘Dyad II’, communication is conducted through the supplier’s sales office channel while in ‘Dyad III’ it is conducted through personnel of each division. This is defined by Forslund and Jonsson (2009) as a serial and parallel communication respectively. As aforementioned in Section 5.1.2.2, communication in ‘Dyad II’ is not completely serially, however; it is likely to lean on the serial basis rather than the parallel communication.

However, the situation in ‘Dyad I’ is different. The relationship and hence the communication between counterparts are formal due to the governmental structure of the supplier compared to the other two suppliers who are from the private sector. Therefore, the supplier’s bureaucratic structure hampers the quality of communication i.e. completeness, timeliness, accuracy and adequacy in the dyad and thus SD efforts. For that reason, frequent meetings and discussions of both top managements cannot be held that often in ‘Dyad I’.

According to previous discussion in Section 5.1, it can be realized that effective communication is the success factor only in ‘Dyad II’. Regular and/or ad hoc meetings between engineers as well as the top managements bring conflict solving opportunities and facilitate the information and knowledge sharing in the dyad (Humphreys et al., 2004). It should be borne in mind, that most meetings are not as frequent as the other contact methods i.e. e-mail, fax and telephone contacts. The latter methods are conducted through the assigned personnel of the buying firm with sales department of the supplier. Timely response to feedbacks in this dyad enhances taking an appropriate action if necessary (Vijver et al., 2001).

Krause and Ellram (1997b), Li et al. (2012) and Hernández-Espallardo et al. (2010) emphasize parallel communication and discuss that the involvement of both parties’ personnel contributes to success of SD. Surprisingly, ‘Dyad II’ uses the serial communication and considers it as an effective and to-and-fro communication by depicting the criteria like being ample, timely, accurate, reliable and complete which are also stressed by Vijver et al. (2001). The common language that both parties have gained over time especially in terms of technical issues demonstrates the active involvement of both firms from an early phase of the relationship. This is supported by Humphreys et al. (2004) who underline the increase of understanding i.e. perceiving the transferred message rightly in the inter-firm communication.
Additionally, the counterparts in ‘Dyad II’ have reached the same perception which is originated from the reasonable relationship and unidirectional understanding between the top managements. According to the empirical evidence, top managements distribute the necessary commands in the firms to create the frequent, open and prioritized atmosphere in the communication structure.

This character of communication i.e. openness and frequency is also supported by Krause et al. (1998) in order to make an effective communication and achieving a maintainable relationship. The most important transferred data and information are technical information and marketing data related to Iran agent and commercial correspondences successively. This requires engineers’ contacts which are conducted through frequent and/or ad hoc site visits, purchasing and sales departments’ relationship. Therefore, ‘Dyad II’ has reached to two-way communication in the relationship which reinforces answering other’s requests and expectations effectively.

**Long-term commitment:** The long-term commitment can be considered as a success factor only in ‘Dyad II’. Considering other party as a partner demonstrates the willingness of dyad to pursue a long-term relationship and contributes to success of SD which is also supported by Humphreys et al. (2004) and Krause and Ellram (1997b). Furthermore, it is discussed that effective communication between partners enhance long-term commitment (Ghijsen et al., 2010). Consequently, ‘Dyad II’ who enjoys the two-way and effective communication (another contributor) exhibits the partnership-orientation of the relationship via the long-term investments by both firms.

As discussed earlier (Sections 5.1.1.2 and 5.1.3.2), true willingness and pure commitment to maintain the long-term relationship which is a result of the long-term commitment does not exist in ‘Dyad I’ and ‘Dyad III’ (Humphreys et al., 2004). In ‘Dyad I’, the supplier’s dominance and governmental structure in the market hinders the willingness of the supplier to be engaged in the continuous relationship. Furthermore, Petrochemical Company must obey the dictated rules from the government as well as oil ministry. This narrows the relationship to the defined limits and reduces the supportive behavior of the top management. Thus the dyad is not served by an ample green light of supplier in terms of full engagement in the SD program (Hartley and Choi, 1996).

In ‘Dyad III’, the shortage of effective communication (Ghijsen et al., 2010) and trust reduce the expected level of long-term commitment to the SD. Risk of opportunistic
usage of invested assets, resources and shared knowledge by supplier does not let the dyad to be open in communication and transfers appropriate information freely. According to the empirical evidence, the acceptance of the present condition as the perfect situation resulted in the shortage of interest to be upgraded. It expresses that Peyman does not seek more benefits and competitive advantages through the present SD program. For the same reasons, it should be mentioned that Peyman’s top management does not committed for the continuous improvement as Hartley and Choi (1996) emphasize the supplier’s top management commitment.

5.2.3. Barriers to Supplier Development in Dyad I, Dyad I and Dyad III

In this section the dyadic perspective of three cases in respect of those factors that hinder the success of SD program in the scope of reviewed literature (Chapter 3, Section 3.2) is discussed.

- **Buyer-specific Barriers**

As is shown in Table 5.12, surprisingly, all dyadic cases do not face barriers which are originated from the buyer’s side. Only ‘Dyad III’ presents the buyer’s reluctance to be engaged more in the SD efforts.

**The buyer’s reluctance to SD:** It can be regarded that this barrier is originated in lack of dyadic strategic objectives which is mentioned by (Humphreys et al., 2011). While the buyer has long-term strategic plans that could be met through mutual efforts in the SD context, the supplier’s goals are already answered by the present level of attempts. Therefore, makes it difficult for buyer to convince its supplier of some terms of SD e.g. quality-related issues. The buyer concerns the lack of supplier’s interest to comply with the expressed SD objectives in order to achieve competiveness.

Furthermore, the supplier expects more financial resource to be allocated which does not have ample economic justification based on the buyer’s plans and resources (Handfield et al., 2000). These hinder the enthusiasm of the buyer to put financial resources, energy and time more than the present level to persuade the supplier of the objectives.
## Supplier Development Barriers

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<tr>
<th>Supplier Development Barriers</th>
<th>Dyad I</th>
<th>Dyad II</th>
<th>Dyad III</th>
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<tr>
<td><strong>Buyer-specific</strong></td>
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<td>Lack of Buyer’s Top Management Support</td>
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<td>The buying firm’s Credibility to its Supplier</td>
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<tr>
<td>Bias-related Barriers</td>
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<td>The Buying Firm’s Effectiveness</td>
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<td>Misguided SD Objectives</td>
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</table>
| The buyer’s Reluctance to SD | ----------- |  | - Lack of supplier’s motivation to continuous improvement  
- Convincing the supplier is time and energy consuming  
- The buyer’s unwillingness to invest more in the supplier’s capabilities |
| **Supplier-specific**        |        |         |          |
| The supplier’s Lack of Commitment | ----------- | ----------- |  |
| Insufficient Supplier Resource | - The supplier did not reach the estimated production capacity  
- Lack of equipment, chemical substances |  | - Disloyalty risk from the supplier  
- Giving the priority to other customers orders  
- Low attention to the quality of products by the supplier  
- Delays in answer to the feedback by the supplier  
- Not an ideal supplier but better than others  
- Shortages to meet big volume orders |
| The Supplier Complacency    | - Asking the buyer’s satisfaction or/and dissatisfaction is artificial | - The buyer is rarely asked for feedback.  
- Evaluation reports are from the buyer’s side  
- No receiving of complaint | - Evaluation and feedback reports are from the buyer  
- No mechanism to measure the buyer’s satisfaction |
Table 5.12: Summary of Barriers to SD between the Three Dyads  
Source: Own Creation
Supplier-specific Barriers

The supplier’s lack of commitment: Lack of supplier’s commitment can only be seen in ‘Dyad III’. Disloyalty, risk of using investments and learnt knowledge opportunistically (Krause, 1999) and lack of total quality commitments (Handfield et al., 2000) which can be seen in this dyad, according to empirical evidence, force Razak to put more energy and time to observe the supplier in order to reach the defined objectives. The serious and strict behavior of the buyer is the sign of its uncertainty about Peyman’s commitment.

As discussed earlier (Section 5.2.2), the supplier’s commitment in ‘Dyad I’ make difficulties for the relationship and the buyer. However, this does not mean that the supplier is not committed to the SD effort. Interestingly, the economic sanctions on Petrochemical Company as well as low supportive behavior of the government resulted in the shortage of necessities and hence reduce the level of supplier’s commitment. This barrier that relates to the context of the relationship gets in the way of mutual growth and effectiveness of the present SD in the dyad.

Insufficient supplier resource: As is depicted in Table 5.12, the supplier of ‘Dyad I’ could not reach to the estimated production volume. This deficiency of enough resources creates a situation that providing requested quantity of raw material is not available for buyers in the SC. Furthermore, Petrochemical Company has international contracts which should be committed too; therefore, the defined and limited quantity is allocated to each domestic buyer. This shortage also affects timely deliveries.

‘Dyad III’ is also suffering shortages in engineering resources, skilled labor, ample machineries and castings etc. to meet Razak’s big orders, although the big equipment are provided by the buyer. These insufficient capabilities could affect timely deliveries negatively which led the buyer to keep alternative suppliers for compensation.

This shortage in the suppliers’ resources is could be seen as a hindrance to the present SD of ‘Dyad I’ and ‘Dyad III’. The suppliers’ competitive advantage that Handfield et al. (2000) and Krause et al. (1999) also mention is in danger.

Interestingly, Krause et al. (1999) discuss, this kind of barrier could be seen in small supplier in terms of annual sales volume and the percentage of the supplier’s sales to buyer. However, ‘Dyad I’ demonstrate this fact differently. Since the Petrochemical
Company is larger than Baharestan associated with the same criteria and still this barrier i.e. insufficient resource can be seen in the dyad.

**The supplier complacency:** Generally, there are similarities regarding lack of suppliers’ care about the buyers’ satisfaction and dissatisfaction in all three dyads. According to Lascelles and Dale (1990), insufficient mechanism to ask buyers’ satisfaction and not paying attention to the buyers’ needs and thoughts by supplying firms are the barrier to the SD. It also reduces the buyers’ willingness to be engaged in the relationship actively.

On the one hand, it is realized that ‘Dyad II’ and ‘Dyad III’ do not have well-organized mechanism to ask and measure their buyers’ satisfaction. Therefore, feedback always is conducted from the buyers’ side without being asked for it. The suppliers never question their buyers’ opinions first. On the other hand, according to the buyer’s perception and experience, although the supplier in ‘Dyad I’ claims about asking its customer’s opinions through structured survey, Baharestan’s thoughts associated with quality, deliveries etc. are not taken into consideration seriously.

**The supplier’s reluctance to SD:** The lack of willingness in the supplier’s involvement of ‘Dyad I’ can be seen as the pitfall to the SD program (Galt and Dale, 1991). It could be initiated in Petrochemical Company’s governmental and exclusive structure. On the one hand, the supplier does not have freedom enough due the governmental rules to expand its relationship and thus cannot join in the SD efforts completely. On the other hand, the dominant power of the supplier leads its top management not to welcome the SD program willingly. This kind of top management’s behaviors is also highlighted by Hartley and Choi (1996) as some kind of hindrance to the SD.

The differentiation in the supplier’s strategic goals with the buyer in ‘Dyad III’ resulted in shortage of Peyman’s enthusiasm to invest more resource e.g. financial resource, time and energy. The benefits already gained through Razak’s investments reduce the supplier’s attempts to be engaged more in the present SD. Therefore, it should be noted that providing direct resources by the buyer brings an adverse result and makes the supplier indolent.
Buyer-supplier Interface Barriers

Poor communication and feedback: As discussed above in Section 5.2.2, ‘Dyad II’ enjoys the effective and to-and-fro communication while the rest two dyads suffer from poor communication. There is not an ample opportunity to create appropriate communication channel between two parties which is raised from the supplier in ‘Dyad I’. The inability of Petrochemical Company is originated in its bureaucratic structure and reduces the effectiveness of communication particularly its timeliness (Lawrence, 2004). Furthermore, the shared information and knowledge might not been received by the right person in the supplying firm which is highlighted as the problems in the recipient of knowledge by Dyre and Hatch (2006). This makes information poor and hinders the effective communication.

Krause et al., (1999) depict that suppliers, especially small suppliers are likely to have communication problems in being known by the buying firm or the buying firm knows very little about them. On the contrary to this statement, the buying firm is known a little by its supplier in ‘Dyad I’. This can be explained by the dominant nature of supplier as an exclusive firm who all manufacturers in this industry are its customers.

Furthermore, the technical information that Baharestan transfers to the supplier is not attractive enough to encourage Petrochemical Company to grasp them effectively. This is discussed previously (Section 5.1.1.1) that amount and type of technical information is not seen considerably essential for the supplier who has considerable specialties as well as experiences in the polymeric issues. However, it is also discussed that some of particular transferred information can be useful for the supplier in terms of the quality improvement of the materials. This is in the line with Dyre and Hatch (2006) statements why the information and knowledge transfer cannot motivate another party.

In ‘Dyad III’, the communication is not effective same as ‘Dyad I’, but due to the different reasons. The supplier of the dyad suffers from lack of appropriate structure for communicate in terms of suitable human resource, relevant knowledge to communicate effectively, enough attention to response on time and appropriate communication setup (e.g. electronic method such as e-mail). This can be regard as the lack of absorptive capacity (Dyre and Hatch, 2006) as well as lack of knowledge to perceive and respond on time which hinder the SD’s success (Lawrence, 2004).
**Lack of trust:** Another barrier that ‘Dyad III’ faces compared to the rest two is lack of the buyer’s trust in the supplier. Razak fears of shared knowledge leakage especially in terms of quality standard. Moreover, according to the buyer’s perception, it is not impossible that the supplier shifts to another customer in the SC. These factors can be originated in the wrong perception of the buyer as Nagati and Rebolledo (2013) and Handfield *et al.* (2000) discuss. They point out that the perception gap between parties causes considerable damages to another party’s trustworthiness.

According to Handfield *et al.* (2000) ineffective communication is one of the constraints on building trust. In this regard the abovementioned discussion about poor lines of communication and not to be open eagerly in ‘Dyad III’ damages the interface between the buyer and the supplier.

The climate of trust contributes to a better commitment and exchange of information between parties (Nagati and Rebolledo, 2013). In order to achieve important information which is necessary to maintain the relationship, the buyer in ‘Dyad III’ generates control methods as a safeguard in order not to lose the positive effect of its investments.

**Insufficient inducements to the supplier:** This pitfall is seen in none of the studied cases. However, it worth noting that ‘Dyad I’ does not use inducements in a usual ways that buying firms apply e.g. promise to increase purchase, recommendation and priority for future business etc. According to the dominance and governmental orientation of the supplier, there is no opportunity for Baharestan to use a mechanism for the supplier’s stimulation. However, as discussed in Section 5.2.1 confirmation of material especially new material could be regarded as an incentive for the supplier.

**Poor alignment of organizational cultures:** None of the dyadic cases mention this factor as a hindrance to their present SD.

**Power related issues:** All three cases suffer from lack of balanced power especially in negotiations. ‘Dyad I’ indicates the dominance and exclusiveness power of the supplier which leads the negotiation goes to its favor. The annual sales volume and the percentage of the supplier’s sales to the buyer is dramatically less than the buyer’s purchase volume from this supplier. Furthermore, unbalanced relationship in terms of power resonates with the supplier’s governmental orientation. Since most terms and conditions are dictated from oil ministry to Petrochemical Company. The fact that the
supplier in ‘Dyad I’ has more power than its buyer is on the contrary to Krause’s et al. (1999) findings which reveal that the supplier are usually in a weak position than the buying firms.

On contrary to ‘Dyad I’, the power is in the hands of buyers in the remaining two dyads i.e. ‘Dyad II’ and ‘Dyad III’ which is in the line with Krause’s et al. discussion in respect of power issues.

Types of ordered products i.e. heavy machineries in ‘Dyad II’ lead the buyer to get the power advantage. Since Tederic does not have ample experience and thus the respective capabilities must be conformed to Baharestan’s requirements which increase the buyer’s influence in the relationship. In addition, the price of these types of machineries has huge difference compared to small ones. This brings considerable turnover for the supplier which strengthens the buyer’s power in turn.

Same as ‘Dyad II’, ‘Dyad III’ does not have balanced relationship associated with power which is the result of the ownership of resources. The assets that are applied in the supplier of ‘Dyad III’ and the high percentage of sales volume which belongs to Razak make the buyer more powerful to obtain favorable terms in the negotiations. Furthermore, shortage of knowledge and lack of capabilities that the supplier had faced in early phase of relationship bring more power for the buyer that still exists.

**Lack of profitability:** None of the cases finds the SD program non-profitable.

**Risk of losses:** All three dyads consider the risk of losses associated with their investments (direct or indirect and tangible or intangible) if the relationship terminates unexpectedly.

Despite ‘Dyad II’ and ‘Dyad III’, ‘Dyad I’ is faced with uncertainty which relates only from the buying firm. The supplier in this dyad does not realize any risk associated with the present SD which could be due to its dominant power in the industry and attraction for other buyers to start the joint action with it. The current SD efforts are known by all plastic pallet producers, hence finding another interested company to join is not difficult for Petrochemical Company.

On the contrary, if the supplier of ‘Dyad I’ shifts to another producer of the pallet which is also highlighted by Krause et al. (2000), the buyer will lose the investments on the respective molds and equipment. Since these types of products are not attractive for
ordinary customers and only petrochemical companies in the market might be interested in these type of plastic pallet for the packaging of the raw material.

Interestingly, the supplier’s fear in ‘Dyad II’ is different from ‘Dyad III’. While the supplier in ‘Dyad III’ might lose the market share if the relationship with its buyer is disconnected, increase of the export volume to Iran market i.e. market share growth brings the threat to the supplier of ‘Dyad II’ since Tederic might be imposed sanctions by western countries.
6. Conclusions

In this chapter the main results and conclusion of the study are highlighted. Each research question (RQ) is answered separately and in a concise manner since the detailed answers are represented in Chapter 5 and then is followed by contribution to the existing theory. Afterwards, practical contributions, limitations and future research suggestions are presented in this chapter.

6.1. Answer to the Research Questions (RQs) and Theoretical Contribution

In the scope of reviewed literature on SD, dyadic perspective associated with practices, success factors and barriers is not included which is also underlined by Nagati and Rebolledo (2013) and Mortensen and Arlbjørn (2012). Therefore, an inter-organizational i.e. dyadic perspective fills this gap in the literature through considering both involved parties’ point of views. Therefore, it contributes to reinforce the findings of this study. Furthermore, the academic literature about SD is mostly conducted through surveys and questionnaires (Mortensen and Arlbjørn, 2012; Wouters et al., 2007), while this study is interesting according to its case study research orientation. By the help of case study, the author has in-depth and detailed investigation on each dyad in terms of creating the dyadic view.

6.1.1. What are the Practices of Supplier Development from the Dyadic perspective? (RQ 1)

Table 6.1 shows what kinds of SD practices exist in each dyad. In Section 5.2.1, similarities and differences in respect of each activity in different dyads are discussed. It is also explored the illustration how the practices are conducted in each dyad. Further, it is to partially describe the importance why the practices are done in the dyads through considering both the buying firms’ and respective supplier’s views.
<table>
<thead>
<tr>
<th>Supplier Development Practices</th>
<th>Dyad I</th>
<th>Dyad II</th>
<th>Dyad III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitive pressure</td>
<td>☒</td>
<td>☒</td>
<td>☑</td>
</tr>
<tr>
<td>Supplier evaluation</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>Buying from a limited number of suppliers per purchased item</td>
<td>☒</td>
<td>☒</td>
<td>☑</td>
</tr>
<tr>
<td>Raising performance expectations</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>Communication and feedback</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>Knowledge Transfer</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>Recognition</td>
<td>☒</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>Supplier incentives</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>Site visit</td>
<td>☒</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>Long-term contract</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>Technical assistance in improving suppliers’ parts and materials</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>Expectation of Supplier’s certification</td>
<td>☒</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>Intensive information sharing</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>Training and education of a supplier’s personnel</td>
<td>☒</td>
<td>☒</td>
<td>☑</td>
</tr>
<tr>
<td>Exchange of personnel between the two firms</td>
<td>☒</td>
<td>☒</td>
<td>☑</td>
</tr>
<tr>
<td>Supplier involvement in the buyer’s NPD and development</td>
<td>☑</td>
<td>☑</td>
<td>☒</td>
</tr>
<tr>
<td>Direct investment in a supplier by buyer</td>
<td>☒</td>
<td>☒</td>
<td>☑</td>
</tr>
</tbody>
</table>

Table 6.1: The SD Practices of the Dyadic Cases
Source: Own Creation

Table 6.1, shows what types of the practices that exist in each dyad. The number of SD practices in ‘Dyad I’ is less than other dyads. However, all three cases are simultaneously involved in both direct and indirect SD activities discussed in Section 5.2.1. According to empirical evidence, it could not find the sequence between direct and indirect practices. This means, the buying firms have initiated these activities according to the demands. Through collaboration progress, some activities are eliminated such as buying from alternative suppliers in ‘Dyad II’ or elimination of on-site verifiers in ‘Dyad I’ and some practices are added such as purchasing machineries for the supplier in ‘Dyad III’.

According to Wagner’s (2010) proposal, the buying firms should first engage in indirect SD activities before starting the direct SD practices to avoid further misunderstanding and thus reach the better results. Based on the characteristics of each dyad’s relationship explained in Chapter 4, it can be concluded that the SD practices are initiated according
two views. Firstly, the buyers might know the supplier and probable deficiencies based on previous knowledge and experience e.g. ‘Dyad I’. This contributes to establish SD activates in very beginning phase of the business relationship. Secondly, the SD activities could be established based on relationship progress over time e.g. ‘Dyad III’ and ‘Dyad II’.

Based on the second view, it is inevitable that a degree of indirect activities is applied between parties regardless SD program consideration. The example of such unavoidable activities could be buying from the alternative suppliers, performance evaluation and communication. Therefore, based on Wagner’s (2010) suggestion, it could conclude that the buying firms are likely to initiate the indirect SD practices sooner than the direct activities. The empirical evidence of dyadic cases is also affirming this.

The table above is adapted from the stepwise model of SD practices (see Figure 3.2) which is mainly based on Sánchez-Rodríguez’s et al., (2005) model. They reveal the interrelationships among the various supplier development practices based on their categorization. According to the empirical evidence of this study, it can be concluded that the SD practices that are categorized based on the level of buying firm’s involvement in inter-firm relationship does partially follows the degree of sequence to establish. However, the implementing of the SD practices at the bottom of the model i.e. low buyer’s involvement is done in an early phase of relationship even before establishing the SD program. The findings demonstrate that in the second two buyer’s involvement activities types i.e. moderate and high levels are usually not conducted in order. Based on buying firms’ decisions and needs these activities are implemented.

Interestingly, the findings in this research present the idea that each dyad can eliminate and/or keep the lower level of buyer’s involvement activities when they start the moderate and high level of buyer’s involvement practices. This reveals the fact that different SD practices are conducted and maintain in a dyad based on its importance and also the inter-firm relationship condition. As discussed earlier, the more the SD program’s progress is successful; the low buyer’s involvement activities may lose their colors in the relationship. However, this smooth distinction cannot be found between moderate and high level of buyer’s involvement activities.

Understanding the SD activities conducted in inter-firm relationship is enhanced by the in-depth study of each case based on dyadic view. Therefore, it is essential to note that
three dyadic cases cannot manifest single position in the stepwise model. Furthermore, it does not reveal the distinct shift from one level to another level over time. The activities of the SD program in three dyadic cases are spread out in all three levels.

6.1.2. What Factors Lead to a Successful Supplier Development Program from the Dyadic Perspective? (RQ 2)

Table 6.2 demonstrates what factors contribute to the successful SD program according to the dyadic perspective of each case. In Section 5.2.2, it is discussed how different factors extracted from reviewed literature influence the success of SD positively. Furthermore, the empirical evidence reveals possible indicators to verify the success factors in each dyad through considering both the buying firm’s and respective supplier’s view. This is enhanced by deep investigation in each case i.e. the buying firm and the supplier.

<table>
<thead>
<tr>
<th>Success Factors of Supplier Development</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Buyer-specific</strong></td>
</tr>
<tr>
<td>Long-term Strategic Goals</td>
</tr>
<tr>
<td>Top Management Support</td>
</tr>
<tr>
<td>Power Influence Strategy in SD</td>
</tr>
<tr>
<td>Buyer Commitment</td>
</tr>
<tr>
<td><strong>Supplier-specific</strong></td>
</tr>
<tr>
<td>Supplier’s Expectations in its Strategic Objectives</td>
</tr>
<tr>
<td>Conformity of supplier’s Capabilities</td>
</tr>
<tr>
<td>Supplier’s Commitment</td>
</tr>
<tr>
<td><strong>Buyer-supplier Interface</strong></td>
</tr>
<tr>
<td>Knowledge Sharing and Transfer</td>
</tr>
<tr>
<td>Trust</td>
</tr>
<tr>
<td>Communication Methods and Effective Communications</td>
</tr>
<tr>
<td>Long-term Commitment</td>
</tr>
</tbody>
</table>

*Table 6.2: The Success Factors of SD of the Dyadic Cases*

*Source: Own Creation*

The findings of this study are consistent with the scope of literature review that pinpointed the possible factors which lead the SD program to be fruitful. It should be
also considered that the dyadic perspective provides a contribution to the existing literature. The question that might be arisen is: Are these factors really contributors to the successful SD program? By including the supplier’s point of view, the verified success factors could be affirmed stronger. Furthermore, by the help of case-study research design, the deep examination is fulfilled in order to identify what is the meaning of each factor according to the dyadic view and what expectations both firms might have to achieve through having these contributing factors in the relationship.

On the one hand, the findings in this study demonstrate that there are conflicting views in respect of success factors according to another party’s standpoint. The conflicting views can illustrate the differences between the understandings and perceptions of one part from another party.

On the other hand, it is essential to note that most activities that the buyers initiate in the suppliers are conducted for the success of the present SD programs. All tangible and intangible efforts focus on preventing possible failure. This lightens the way to determine true contributors for the SD based on merging each party’s formulations and beliefs (Mortensen and Arlbjørn, 2012).

In general, all three dyadic cases consider all factors taken from reviewed literature as the success factors. However, there are some factors that do not exist in the specific dyad and thus determination of that factor is not possible from that particular dyad’s view. Although, it is interesting that all success factors are verified by three cases, the comprehensive case study contributes to underline other success factors further the scope of reviewed literature.

According to previous studies the buyer’s top management support is regarded as one of success factors to the SD (Li et al., 2012; Humphryes et al., 2004; Krause, 1999), since they initiate and implement the SD program (Krause and Ellram, 1997b). However, the supplier’s top management support is not considered as a contributing factor in the studied literature. It should be noted that strategies, resources, encouragement and positive behaviors such as commitment comes down from the firm’s top-level managers as Humphreys et al. (2004) mention that the top managements bring conflict solving opportunities and facilitate the information and knowledge sharing.
For these reasons, it could be concluded that the supplier’s top management support might be as important as the buyer’s top management support. Without the approval of the supplier’s top management and its green light it is hard to maintain the SD effort effectively. The buying firms should bear in mind that top management’s welcome of the suppliers facilitates and resonates the buyers’ efforts considerably. Therefore, the summary of success factors according both counterparts’ perspective is revealed in the Figure below.

Furthermore, ‘Dyad II’ demonstrates another success factor based on the previous experience of the SD program by the supplier. The knowledge that supplier has achieved through its involvement in the inter-firm relationship with another customer under the name of SD might clarify relevant problematic issues. Consequently, the previous acknowledgment contributes to better realization what the supplier wants in the present SD program knows associated with expectations and objectives. The common understandings and views can be conducted through appropriate line of communication. Thus, the commitments and chances of success to achieve reciprocal benefits may be built up easier in the alliance.

Figure 6.1: Success Factors of SD based on the Dyadic View
Source: Own Creation
6.1.3. What are the Barriers in Supplier Development Program from the Dyadic Perspective? (RQ 3)

Table 6.3 exhibits what factors may hinder the success of SD program according the dyadic perspective of each case. In Section 5.2.3, it is discussed how different factors taken from reviewed literature could hamper the effectiveness of the SD programs and efforts. Furthermore, the empirical evidence reveals possible indicators to verify the pitfalls in each dyad through considering both the buying firm’s and respective supplier’s view. This is enhanced by deep investigation in each case i.e. the buying firm and the supplier.

<table>
<thead>
<tr>
<th>Barriers to Supplier Development</th>
<th>Buyer-specific</th>
<th>Dyad I</th>
<th>Dyad II</th>
<th>Dyad III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of Buyer’s Top Management Support</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>The buying firm’s Credibility to its Supplier</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>Bias-related Barriers</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>The Buying Firm’s Effectiveness</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>Misguided SD Objectives</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>The buyer’s Reluctance to SD</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✔</td>
</tr>
<tr>
<td>Supplier-specific</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The supplier’s Lack of Commitment</td>
<td>✗</td>
<td>✗</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Insufficient Supplier Resource</td>
<td>✔</td>
<td>✗</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>The Supplier Complacency</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>The supplier’s Reluctance to SD</td>
<td>✔</td>
<td>✗</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Buyer-supplier Interface</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of Trust</td>
<td>✗</td>
<td>✗</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Insufficient Inducements to the Supplier</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>Poor Alignment of Organizational Cultures</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>Poor Communication and Feedback</td>
<td>✔</td>
<td>✗</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Power Related Issues</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Lack of Profitability</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>Risk of Losses</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.3: The Barriers to SD of the Dyadic Cases
Source: Own Creation

Surprisingly, based on the above-mentioned table, except one barrier, the other factors which might hinder the SD’s success are not originated in buying firms’ side. Including
both buying firm’s and supplier’s views and deep case study enhance to find out that almost there is no buyer-specific barrier in three dyadic cases. Although, the findings of this research affirm Handfield’s et al. (2000) statement that the pitfalls are likely to occur in the supplier-specific category, occasional barrier i.e. only one factor in buyer-specific area is very interesting.

It can be presumed that under SD umbrella, the buying firms are likely to put forth great efforts in the relationship to guarantee their suppliers’ capabilities and performance improvement and thus achieve competitive advantages. It can be because of the direct/indirect and tangible/intangible investments in the supplier. Most investments are conducted by the buying firms on behalf of the suppliers, as suggested in the literature, in order to correct the suppliers’ performance and capabilities. Therefore, maybe this kind of barriers is less likely to appear.

It could be assumed that the buyers may be reluctant to state those barriers originated in their sides, however, the suppliers’ affirmation that there is no potential barriers originated in the buying firms, makes the finding more interesting. It should be borne in mind that lack of buyer-specific barriers in the dyads cannot guarantee the complete success of the present SD programs. Although, this shortage could positively affect the implementation of SD practices still there are some other barriers in different areas that could affect the progress not to be more successful. Fewer barriers in the buyer-specific area might be results of other issues which could be laid in the context of the relationship between each party.

All three cases are chosen from plastic industry which may influence the lack of the buyers’ barriers. It might be assumed that in this industry, rare barriers can fell into the buyer-specific type or this kind of pitfalls is diminished over time. As a result, none of the parties mention them. Moreover, it could be possible that the suppliers do not realize the probable pitfalls or they are reluctant to express them. Very close relationship in the dyad e.g. ‘Dyad II’ may cause the supplier to prevent stating or arm’s length relationship e.g. ‘Dyad I’ make the supplier being too far to realize the hindrance.

One of the goals of this study is to highlight the factors that could hinder the success of SD in three different areas; supplier-, buyer- specific and interface between the buyer and the supplier. From the analysis and discussion, several pitfalls can be represented that are not mentioned in the reviewed literature.
Firstly, previous studies have come to a consensus on the importance of the buyer’s top management’s role in the SD since the top management must be aware of the competitive benefits (Krause, 1999). For the same reasons, the lack of buyer’s top management support can be regarded as the barrier to the SD (Humphreys et al., 2011; Handfield et al., 2000).

Nevertheless, to the best of this study’s knowledge, lack of the supplier’s top management is not discussed as a pitfall to the SD transparently, although Hartley and Choi (1996) mention the importance of the supplier’s top management commitment. Shortage of the supplier’s top management support influences the acceptance of the implanted SD. Therefore, lack of this support hinders the progress and speed of any inter-firm activities and should be taken into consideration by the buying firm. For these reasons, it could be concluded that the supplier’s top management support might be as important as the buyer's top management support. Without having the supplier’s top management support, creating a synergetic atmosphere in the relationship is not feasible.

Secondly, it is worthy to note that two dyadic cases affirm the buyer’s power in the interface between the buying firm and the supplier hinders the effectiveness of the SD program. However, ‘Dyad I’ shows that if the power is in the hand of supplier it will negatively affect the SD program too. The unbalanced relationship in favor of one party is the barrier regardless who is that party. Consequently, it is in the contrast with Krause’s et al. (1999) statement who mention that suppliers have problems with their buying firms in obtaining favorable terms during negotiation.

Thirdly, it is vital to consider that reviewed literature stress the importance of direct investment in the supplier as an active tool to accelerate the supplier’s capabilities improvement in order to reach the quality products to deliver to their own customers (Wagner, 2010; Krause et al., 2000; Monczka et al., 1993). By the help of stepwise model, the highest buyer involvement practice at top is direct investment that explicitly exists in ‘Dyad II’.

The supplier enjoys the invested asset and capital in the firm in order to produce quality subassemblies but the other side of the coin is that the supplier’s motivation to spend its own resources, energy, time and capital is reduced which is underlined in the supplier’s reluctance barrier. In this respect, the indolence that might occur in the supplier is the negative effect of active and direct investment applied by the buyer.
Regardless what are the reasons behind the laziness of the supplier, this attitude can be regarded as the hindrance for the supplier to fully tie itself to the relationship and thus does not follow SD program entirely. Therefore, the buying firms should consider this kind of behavior when choosing a supplier to develop.

Finally, from the analysis and discussion in the previous chapter, it is demonstrated that there are other factors which play a vital role in hindering the success of SD efforts. These factors cannot be categorized into any of the mentioned areas as Handfield et al. (2000) note. ‘Dyad I’ and ‘Dyad II’ vividly present the barrier that is connected to the context of the relationship which is not originated from one party or the interface aspect. The political condition that is dominant in Iran affects the effectiveness of suppliers and/or buyers in the market. The economic sanctions on Iran influence the capabilities of the supplier in ‘Dyad I’. Therefore, the supplier’s commitments, sufficiency of resources, readiness and enthusiasm to the SD program are reduced significantly. This hinders the efficiency and effectiveness of inter-organizational attempts to survive, grow and be profitable in the SC.

For the same reason (economic sanctions), the supplier of ‘Dyad II’ fears to increase its sales i.e. expanding the partnership with its buyer in order not to be put in trouble in terms of business relationship with other international customers. In this respect, it should be borne in mind that regardless what are the reasons behind context barriers, the success of inter-firm relationship and SD efforts may ruin.

The figure below demonstrates the barriers in four areas that a dyad can face in the SD program; buyer-specific, supplier-specific, the interface between counterparts and the context barriers.
6.1.4. Practices, Success Factors and Barriers of a Dyad in a Supplier Development

According to above-mentioned issues demonstrated in previous sections relation to the SD in respect of the practices, the success factors and the barriers, it is worthwhile to bring the general model developed in the theoretical framework in this section to highlight overall findings.

Figure 6.2: Barriers to SD based on the Dyadic view  
Source: Own Creation
Figure 6.3: The General Model of SD Practices, Success Factors and Barriers for a Buyer–supplier dyad view
Source: Own Creation
6.2. Practical Contribution

Thanks to the within-case analysis in previous chapter, Section 5.1 (see Figure 5.1, the black horizontal ‘A’ arrows), the findings have practical implications for buying firms and suppliers are involved in a SD program and efforts. Firms accept to be engaged in the SD program in order to reap the greater benefits and competitive advantages through mutual upgraded relationship.

First and foremost, managers of buying firms and suppliers must aware of the reasons lying in the SD program and projects in order to align organizational capabilities, resources etc. with another party to achieve the same level of benefits at a lower risk through the cooperative climate. The conflicting views and similar views represented in the mentioned section of this research is an opportunity for both counterparts to investigate the problematic issues in the dyad.

The gaps between firms’ perceptions from each other cause misunderstandings which in turn might influence the success of the dyad adversely. The contradictory views could hinder the fruitful collaboration. The attempts to realize where these conflicts exist and try to manage them could bring the common views and understandings to the dyad and thus successful SD program.

6.3. Limitations

The conclusions drawn in this study should be read and interpreted through the lenses of some limitations. First, three dyadic case study could narrows the findings, however, due to the restricted time investigating more dyadic cases were not feasible for the author.

Second, defined time frame work and shortage of financial resource limits the broad view of the study. It is not possible for the author of this thesis to touch other focal companies in other industries. Furthermore, including more buying firms and respective suppliers who have the willingness to be interviewed is not feasible due to the time restriction.
Third, shortage knowledge in Swedish language of the author is also should be taken into account. Since, it reduces the possibility of finding a buying firm and its respective supplier(s) in Sweden in order to participate in the study through English language.

6.4. Suggestions for Future Research

The purpose of this study is determining the SD practices according to the dyadic perspective. Afterwards, the factors which contribute to inter-firm success or hinder the relationship are verified according to the reviewed literature. Therefore, it is suggested that the further research is conducted to investigate the possibility that if a factor is not a contributor in a dyad, could it be considered as a barrier to that SD. The same research can be applied for the barriers to the SD which means that the lack of a barrier in an inter-firm relationship could be regarded as a success factor.

One avenue for future research could be to conduct in different industries to investigate the similarities and differentiation between the SD practices, success factors and pitfalls in each dyad. Doing so enhances the replication of the findings by testing the theory in other industries as well.

Thirdly, the conclusion of this study presents the success factors could be occurred in three different areas. It is proposed to have a further study in respect of those success factors that might exist in the context of relationship which can contribute to success of the SD regardless the buyer-, supplier-specific and the interface between partners.

Moreover, in respect of lack of barriers in the buyer-specific category, it is proposed to conduct longitudinal case studies of SD to learn the gradual shifts that could occur in the relationship in the scope of implemented SD program. Doing so would enhance the in-depth investigation of this type of barriers in the inter-firm relationship.

Finally, further studies could examine each hindered and contributing factors that are fallen into buyer- and supplier-specific could be replaced to another area. If the factors in the supplier-specific area for instance, have the same influence on the SD if they are studied in another area i.e. buyer-specific.
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Sazeh Gostar Peyman Co.,: [www.peymancaster.org](http://www.peymancaster.org) (17-04-2013)

Tederic Machinery Co., Ltd.: [www.tedericcn.com](http://www.tedericcn.com) (05-04-2013)
Appendix I: Interview Guide

Interview questions for the buying firms:

- Ask the permission to record the interview from the respondent (Make sure that the voice recording will only be used for this research and not otherwise)
- Start the interview with a self-presentation (Name, university, program, level, research topic)
- Create a relaxed atmosphere
- Present the general overview of the interview (the various sections, dyadic perspective of the research, purpose etc…)
- Ask the respondent position and period of work experience in the company

1- SD Practices

a) Apart from placing orders and receiving goods, do you have more collaboration with this supplier? (determination of SD)
b) When did you start to deal with this supplier?
c) Why did you start SD efforts? (strategic, ad hoc or reactive approach)
d) Apart from simply receiving supplies what activities have you been doing together with this supplier over time?
e) What practices do you have now in your SD efforts with this supplier? (Check mark in table and obtain possible explanation of the functioning to understand the level of involvement)

<table>
<thead>
<tr>
<th>SD Practices</th>
<th>Example of practices</th>
</tr>
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<tbody>
<tr>
<td>Buying from alternative suppliers to provide competition for current suppliers (Competitive pressure)</td>
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</tr>
<tr>
<td>Evaluation of supplier performance (Supplier evaluation)</td>
<td>Quality standards, delivery time, number of received defected products, precision of delivered quantity, random testing of delivered products</td>
</tr>
<tr>
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</tr>
<tr>
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<td>Communication methods, frequency of communication, feedback meetings return inwards, sending feedback of evaluation</td>
</tr>
<tr>
<td>Knowledge Transfer</td>
<td>Learning seminars, working together, on-site consultation, inviting supplier’s personnel</td>
</tr>
<tr>
<td>Recognition</td>
<td>Company news letter, business dinners, supplier council meeting, banquets</td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Promises of increased current and/or future business if supplier performance improves (Supplier incentives)</td>
<td>Priority for future business, higher order volumes, promise for extended contract, recommendations</td>
</tr>
<tr>
<td>Site visit</td>
<td>Inspection</td>
</tr>
<tr>
<td>Long-term contract</td>
<td>5 years, 10 years or open contracts etc…</td>
</tr>
<tr>
<td>Technical assistance in improving suppliers’ parts and materials</td>
<td>Visiting engineers</td>
</tr>
<tr>
<td>Expectation of Supplier´s certification</td>
<td>Certification by buyer, certifying organization,</td>
</tr>
<tr>
<td>Intensive information sharing</td>
<td>POS, EDI, accounting and financial data, cost quality levels information, technical and production process information exchange</td>
</tr>
<tr>
<td>Training and education of a supplier’s personnel</td>
<td>Organized training sessions, temporary personnel transfer</td>
</tr>
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<td>Purchase of required machines, tools and casting, improving machines, specialized training of suppliers personnel</td>
</tr>
</tbody>
</table>

f) What do you no longer do together? And why?

2- **SD Success Factors**

2-1- **Buyer-specific Success Factors**

a) Are you satisfied with the performance of this supplier through the SD efforts?

b) What are your long-term strategic goals with respect to the SD efforts?

b-1) What are your plans (strategy) to develop supplier’s future capabilities in technology, product development and other aspects?

c) What is top management doing to support the SD efforts? (willingness, allocate resources, aware of benefits, give encouragement)

d) Do you influence the supplier to follow the SD efforts? (request, promises, threat, legal)
e) How committed are you to the SD efforts or what demonstrates your commitment to the SD efforts? (investment, relationship development, long-term contracts)

2-2- Supplier-specific Success Factors

a) Do you think that this supplier’s expectation for future improvement and growth is served by the SD efforts?

b) What does this supplier do to conform to your requirements? (What do you do to adjust your supplier’s capabilities to solve your needs?)

c) Is this supplier committed to your SD efforts and how does it show this commitment? (loyalty, longevity relationship, cooperation)

d) Have you invested in this supplier to make it adapted to your needs (in knowledge, structure or process e.g. special machine, new technology or EDI)

2-3- Buyer-supplier Interface Success Factors

a) Do you share and transfer knowledge with this supplier? (training, on-site technical assistance)

a-1) What kind of knowledge do you transfer?
  • Explicit knowledge (operation manuals, written instructions)
  • Tacit knowledge (knowhow, personal experience)

a-2) How helpful is this to the supplier and to you?

a-3) How has the knowledge sharing and transfer improved the performance and capabilities of this supplier?

b) Do you trust this supplier? And do you think this supplier trust you?

b-1) How is this trust demonstrated between you and your supplier? (Information sharing intensity, loyalty, truthfulness, joint action)

c) What communication methods are used to ensure on-time, accurate and appropriate data? (1- telephone, fax, e-mail, written and face-to-face discussions, 2- computer to computer, EDI and ERP)

  c-1) Is the communication to-and-fro? and how is it (ample, open, concise, timely, accurate, frequent, complete and credible communication)

d) Do you think both partners have a long-term commitment to the SD efforts?

  d-1) How is this manifested? (realignment of goals and objectives)
3- Barriers

3-I- Buyer-specific Barriers

a) Why does top management not support the SD efforts (if the answer of question 2-1-C is negative- lack of willingness- lack of awareness of benefits- lack of encouragement)

b) Do you demonstrate your expectations of quality? And are you consistent in improving quality to this supplier for your credibility? (frequent changing of schedule and switching suppliers per purchasing, poor purchasing - influence buyer credibility)

c) How dependent are you on this supplier in terms of purchased volume?

c-1) Do you pay less attention to some suppliers in your SD efforts? Why? (the size matter in your SD efforts)

d) Do you think you are quite effective through this SD efforts for this supplier to enable it grow and be profitable?

e) Do you think your SD objectives are clear to this supplier?

f) What aspect of the SD efforts do you think are not worth investing much concern in and why? (reasons - small-quantity purchases, not important supplier, non-compatible strategic objectives of supplier with the buying firm, lack of immediate return)

3-II- Supplier-specific Barriers

a) Why do you think this supplier not committed to your SD efforts (if the answer of question 2-2-C is negative- lack of loyalty, resource investment, patience & attention to quality- reaction to feedback - failure in training sessions)

b) Do you think your supplier is less equipped for the success of your SD efforts (engineering resources, equipment, information systems and employee skills)

c) Does this supplier find out if you are satisfied or not? (ask for buyer’s satisfaction from the buyer)

d) What aspect of the SD efforts do you think this supplier is not willing to engage in and why? (reasons - lack of freedom, lack of tangible evidence for support from the buyer)
3-3- **Buyer-supplier Interface Barriers**

a) Why is there no trust between both firms? (if the answer of questions 2-3-b is negative- fear of competitors acknowledgement in the SC and using the information exchanged opportunistically, arm's length relationships and ineffective purchasing strategies)

b) Are there any changes in your firm or in this supplier that have negatively affected the SD efforts? (new supplier entrance, shift in geographical location and expectation changes)

c) Do you encourage this supplier and is it aware of the encouragement to induce it for a better performance? (incentives)

d) Do you clearly and openly communicate your dissatisfaction and satisfaction with this supplier? Do you also get clear and open feedback?

d-1) Do you feel this supplier is deficient in understanding your shared information?

d-2) Do you think the size of this supplier influences the volume of the communication?

e) Do you usually have balanced negotiations with this supplier? And why?

f) Are you purchasing a large volume of products from this supplier? (**If it is yes:** What are the effects of your purchases on the growth of this supplier in your SD efforts?)

g) Do you think the acceptance of SD efforts in this supplier is profitable for both of you?

h) Do you face any risk of losses in the SD efforts with this supplier?
Interview questions for the Supplying firms:

- Ask the permission to record the interview from the respondent (Make sure that the voice recording will only be used for this research and not otherwise)
- Start the interview with a self-presentation (Name, university, program, level, research topic)
- Create a relaxed atmosphere
- Present the general overview of the interview (the various sections, dyadic perspective of the research, purpose etc…)
- Ask the respondent position and period of work experience in the company

1- SD Practices

a) Apart from receiving orders and delivering goods, do you have more collaboration with this buyer? (determination of SD)

b) When did you start to deal with this buyer?

c) Why did you accept this buyer’s SD initiatives?

d) Apart from simply delivering supplies what activities have you been doing together with your buyer over time?

e) What SD practices do you have now with your buyer? (Check mark in table and obtain possible explanation of the functioning to understand the level of involvement of this buyer)

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Priority for future business, higher order volumes, promise for extended contract, recommendations

Site visit

Inspection

Long-term contract

5 years, 10 years or open contracts etc…

Technical assistance in improving suppliers’ parts and materials

Visiting engineers

Expectation of Supplier’s certification

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Exchange of personnel between the two firms

Onsite verifier, collocation of staff

Supplier involvement in the buyer’s NPD and development

Product design evaluation meetings

Direct investment in a supplier by the buying firm

Purchase of required machines, tools and casting, improving machines, specialized training of suppliers personnel

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f) What do you no longer do together? And why?

**2- SD Success Factors**

**2-1- Buyer-specific Success Factors**

a) Are you satisfied with the involvement of this buyer through the SD efforts?

b) Do you think your buyer has long-term strategic goals with respect to the SD efforts?

b-1) What do you think about your buyer’s plans (strategy) to develop your future capabilities in technology, product development and other aspects?

c) Do you think your buyer’s top management supports the SD program with your company? (willingness, allocate resources, aware of benefits, give encouragement)

d) Are you influenced by your buyer to follow the SD efforts? (request, promises, threat, legal)
e) How committed is your buyer to the SD efforts or what demonstrates your buyer’s commitment to the SD efforts? (investment, relationship development, long-term contracts)

2-2- Supplier-specific Success Factors

a) Before you met this buyer, did you have any plans (strategic objectives) to improve your performance and capabilities through collaboration with a buyer? (strategic approach)

a-1) Are your expectations for future improvement and growth served by the SD efforts? (Strategic or nonstrategic)

b) Do you align your capabilities to your buyer’s requirements? (What do you do to solve your buyer’s needs?)

c) How committed are you to the SD efforts or what demonstrates your commitment to the SD efforts? (loyalty, longevity relationship, cooperation)

d) Has your buyer invested in your firm to make it adapted to its needs (in knowledge, structure or process e.g. special machine, new technology or EDI)

2-3- Buyer-supplier Interface Success Factors

a) Do you share and transfer knowledge with your buyer?

a-1) What kind of knowledge do you transfer?

• Explicit knowledge (operation manuals, written instructions)
• Tacit knowledge (knowhow, personal experience)

a-2) How helpful is this to your buyer and to you?

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b-1) How is this trust demonstrated between you and your buyer? (Information sharing intensity, loyalty, truthfulness, joint action)

b) What communication methods are used to ensure on-time, accurate and appropriate data? (1- telephone, fax, e-mail, written and face-to-face discussions, 2- computer to computer, EDI and ERP)
c-1) Is the communication to-and-fro? (ample, open, concise, timely, accurate, frequent, complete and credible communication)

d) Do you think both partners have a long-term commitment to the SD efforts?

d-1) How is this manifested? (Realignment of goals and objectives)

3- SD Barriers

3-1- Buyer-specific Barriers

a) Why do you think your buyer’s top management does not support the SD efforts (if the answer of question 2-1-C is negative- lack of willingness- lack of awareness of benefits- lack of encouragement)

b) Does your buyer express its expectations of quality? Do you think your buyer is consistent in improving quality in your firm for its credibility? Do you receive complains of non-conforming products form your buyer? (frequent changing of schedule and switching suppliers per purchasing, poor purchasing - influence buyer credibility)

c) How dependent are you on your buyer in terms of sales volume?

c-1) Do you think your buyer pays less attention to your firm in the SD efforts? Why? (the size matter in your SD program)

d) Do you think your buyer is effective in the SD efforts for your growth and profitability?

e) Do you think your buyer’s SD objectives are clear to you?

f) What aspect of the SD efforts do you think your buyer is not willing to engage in? (reasons - small-quantity purchases, not important supplier, non-compatible strategic objectives of supplier with the buying firm, lack of immediate return)

3-2- Supplier-specific Barriers

a) Why is your firm not committed to the SD efforts (if the answer of question 2-2-C is negative- lack of loyalty, longevity, cooperation, resource investment, patience & attention to quality- reaction to feedback - failure in training sessions)

b) Do you think you are less equipped for the success of the SD efforts (engineering resources, equipment, information systems and employee skills)
c) Do you find out if your buyer is satisfied or not? (ask for buyer’s satisfaction from the supplier)

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a) Why is there no trust between both firms? (if the answer of questions 2-3-b is negative- fear of competitors acknowledgement in the SC and using the information exchanged opportunistically, arm's length relationships and ineffective purchasing strategies)

b) Are there any changes in your firm or your buyer that have negatively affected the SD efforts? (new supplier entrance, shift in geographical location and expectation changes)

c) Do you receive any encouragement from your buyer to induce you for a better performance? (incentives)

d) Do you clearly and openly communicate your dissatisfaction and satisfaction with your buyer? Do you also get clear and open feedback?

d-1) Do you have difficulties in understanding your buyer’s shared information?

d-2) Do you think the size of your firm influences the volume of the communication with your buyer?

e) Do you usually have balanced negotiations with your buyer? And why?

f) Are you selling a large volume of products to your buyer? (If it is yes; What are the effects of your sales volume on the growth of your firm in this SD program?)

g) Do you think the acceptance of SD efforts is profitable for both of you?

h) Do you face any risk of losses in these SD efforts with your buyer?