

Supplier Innovation Drivers

Enabling the creative supplier to award the entire supply chain a competitive edge

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Executive Summary

The importance of added value stemming from supplier involvement during the innovation process of New Product Development has been highlighted by academics, press releases, and expert opinions. For businesses it is relevant to know how the innovation potential of their supplier can be accessed and developed. The focus of this paper, hence, is to provide a closer examination of the factors that buying firms can apply to encourage their suppliers to contribute value during the innovation process. A theoretical framework based on the findings of previous studies on the topic is developed. The model depicts what happens on both sides of the buyer-supplier relationship. A case study is designed and applied in order to investigate how the hypothesized factors and outcomes relate to reality. For this purpose a dual case design is chosen and implemented with a pair of firms which find themselves in a vivid buyer-supplier relationship with innovation efforts at the time of the study. Following a close examination it is reflected on the findings of the case study in order to transfer the results into managerial as well as research implications. The case study depicts trust as an essential component of the investigated partnership. Trust is seen as the basis for granting autonomy, for sharing information and for investing in the relationship in order to develop long term commitment and for providing lasting value to both parties. Furthermore, formally ensuring commitment as well as providing communication and feedback devices have proven as vitally shaping the relationship of the two cases examined. The resulting innovations have the potential to provide a source of competitive advantage and to improve the cost structure of the entire supply chain.

1 Introduction

As competition has moved from single business rivalry towards a level where entire supply chains compete against each other, those businesses closest to the final customer are interested in tapping upon the distinctive potential of their suppliers. According to the research institute State of Flux Limited (2013), 18% of respondents consider supplier originating innovation as the biggest potential value source of buyer-supplier relationships. At the same time supplier driven innovation is identified as being a rather unexploited field of potential value. While the study revealed that buying firms consciously managing supplier relationships can benefit from preferential treatment including supplier generated innovation (Day, 2012; Henke & Zhang, 2010; State of Flux Limited, 2013; Wagner, 2009), it is important for the buying firm to understand which conditions the supplier requires for selecting its customer of choice. Companies such as Siemens Automation Systems that recognized this potential and understand how to create value for their supplier by actively managing the relationship are able to distinguish innovation suppliers that provide Siemens with innovative solutions for components installable within Siemens' products. Similarly, the carbon ceramic automotive brake developed by its supplier SGL as a result of continuously committed relationship management gave Porsche a competitive edge in the luxury car market (Wagner, 2009). Certainly, these buyer-supplier relationships have in common that they provide the supplying and buying Firm alike with valuable competitive benefits. Whereas it is obvious that the buying firm draws a direct competitive advantage from its supplier's innovation, it is more ambiguous what benefits, on top of the financial reward, the supplier seeks that create the incentive to innovate for its customer. Various scholars have studied how to extract innovation from suppliers. However, a deeper understanding on how to encourage the supplier's creative effort in order for the innovation to emerge by explicitly providing certain conditions is necessary in order to understand how buying firms can actively initiate this value creation. Therefore, it is to be analyzed what conditions the customer may provide to either directly stipulate the creative effort with its supplier or to evoke certain processes that favor the creative engagement of its supplier. The relationship between the conditions the customer can provide and their influence on the supplier's creativity effort are conceptualized in a theoretical model explaining how non-financial values affect the buyer-supplier relationship and its innovation potential. Furthermore, a case study investigates an exemplary buyer-supplier relationship in continuous development that has already created innovation benefits. Practical managerial implications are highlighted on the example of the case study allowing for businesses to picture what contributions will allow them to channel supplier efforts towards creative engagement.

First, the existing literature on creativity and supplier innovation is examined on which basis the conceptual model is developed. Second, the cases are presented and the data collected is analyzed upon which implications are drawn and a conclusion is presented.

2 Literature Review

2.1 The Importance of Supplier Driven Innovation

As firms engage in the enduring battle over market share, both providing new sources of value to their customers as well as preempting market opportunities are becoming increasingly important. Through engaging in innovation and New Product Development (Wagner, 2012) the dimensions of competition are altered and opportunities for value creation emerge. In the best case the innovation is successful and allows the firm to exploit a first mover advantage which can include but is not limited to below industry average costs of production or of providing a service, increased efficiency or quality, the creation of switching costs to its customers and a higher value proposition to all its stakeholders. In order to achieve the highest innovation potential a firm should strengthen the upper end of its supply chain. The reason is twofold. Firstly, nowadays firms not only compete on the customer end. Rather, it is whole supply chains that contest against each other (Wagner, 2009). According to Wagner (2009) we are

“at a time when suppliers account for the largest portion of the value delivered to the customer, when the fragmentation of the supply chain has gone beyond the outsourcing of manufacturing and logistics tasks, and when suppliers have to bear more design and development responsibility than before.”

With this in mind, integrating the upper end in the innovation process becomes necessary in order to harvest all of the innovation potential a firm’s supply chain has to offer. Inevitably, when a supplier focuses its innovation on a sole business customer, transaction specific investments will have to be made on both sides eventually. Firms should not worry about the resulting switching costs, however, as they can only be beneficial to both the supplier and its customer in a time where uncertainty and partner switching prevail in most supplier-buyer settings. For the customer, dedication towards its supplier increases the certainty of a long lasting partnership and of receiving preferential treatment (Day, 2011). The supplier is able to protect its customer base because customers will not simply run away at the slightest note of unfavorable news of the supplier. Rather, they are aware

of the uniqueness in service and dedication their supplier provides them with, which grants some leeway to the supplier, compared to working with non-dedicated customers, who can turn away on the slightest notion of an unfavorable condition or event and replace the old supplier with a new one. On the contrary, a customer who applies a sole focus on cost is not guaranteed a successful supplier strategy (Wagner, 2009) as it is a one way benefit for the customer and a sacrifice for the supplier. Rather, a bilateral value exchange that is perceived as utility creating by both parties (Smals & Smits, 2009) is needed to make the innovation effort successful. This shows that soft criteria that are hard to measure become more predictive on the success of a buyer-supplier relationship when a firm is selecting suppliers (Kannan, 2003). Among the four potential sources of value as defined by Smits and Smals (2009), technological knowledge that transforms into intellectual property and reputational benefits can be characterized as intangible value generated in a buyer-supplier partnership. The advantage of this implicit property, inasmuch as it is recognized as value, is a strong source for driving intrinsic motivation for the partner's innovation effort. Whereas the direct sources of value such as financial profit as well as the volume of production (Smals & Smits, 2009) are usually the most obvious and prioritized factors when considering partners for any business relationship, the indirect value will determine the success of the relationship over the long term. Furthermore, it is the implicit aspect of indirect value that creates a sense of causal ambiguity about the relationship that is difficult to understand for competitors. Thus it is the indirect value that creates a potential source for competitive advantage and is hence in the strategic interest of not only the partnership but both businesses' competitive position. Secondly, innovations based on integrative relationships between a Firm and its suppliers might be almost inimitable or else only at high costs to competitors. This can be visualized using the concept of competitive advantage as defined in the resource based view of the firm (Barney & Hesterly, 2009) which determines inimitability with three criteria. First, the relationship between a firm and its suppliers is most likely to be socially complex (Barney et al., 2009) as both sides have to invest considerable time and effort that are later on hard to reconstruct. Second, Wagner (2012) distinguishes two phases in the development of a new product of which the first one includes the early work on generating and sourcing ideas. This phase is found to be characterized as highly dynamic, uncertain and equivocal. Thus causal ambiguity is created (Barney et al., 2009) which characterizes the process leading towards an innovation. Outsiders may fail to see the implicit link between the intangible process and the tangible innovation. Hence, competitors may be unable to directly replicate the firm's innovation. Third, as the development of the relationship will be influenced by unique historical conditions (Barney et al., 2009) at the time, the innovation is path dependent and could evidently not be replicated simply by following the same steps

the innovators did. Including the assumption that the generated innovation is of high value and relatively rare or even unique in its appearance, a firm's decision to include its suppliers in the innovation process will lead to increased competitiveness for the firm and its supply chain on the basis of a sustained competitive advantage (Barney et al., 2009). Hence, supply chain competition and competitive advantage concerns signal the need for integrating suppliers in the innovation process. In order to approach this goal of innovation the existing literature suggests a clear path.

2.2 Creativity

As the initial phase of new product developments consists most often of irregular and spontaneous actions and impulsive ideas, it is suggested to approach it using creativity (Wagner, 2012). Here, creativity is seen as a means to remain the flexibility of adjusting to the fast change of direction and to cope with the inherent indefiniteness of direction during that phase (Wagner, 2012).

Defining Creativity. The concept of creativity refers to an ability to open the mind towards different directions of perspectives, a liberal way of thinking (Dahlberg, 2007) and an ability to process and make sense of the ambiguous pieces of information that confront each other. According to prior findings, creativity can be inherent in the environment, a person, a process, and a product (Dahlberg, 2007). The goal of supplier driven innovation refers to the creative product which can be a process, technique, technology, or method used in a new way of approaching or refining supply chain operations. The creative ability comes natural for some and needs to be revealed through training for others (Amabile, 2012; Dahlberg, 2007). For buying firms this implies that when it comes to selecting the right partner, the creative potential of a supplier should be a much larger determinant than the present use of creativity. Furthermore, creativity was observed to emerge from unconventional behavior that developed outside the routine procedures and frameworks (Amabile, 2012). A relationship basis that allows for enough autonomy and tolerance for such behavior to develop as well as sufficient trust in the partner's qualities and capabilities is able to create an uninhibited environment for creative ability to flourish.

Measuring Creativity. Within an organizational context the creativity criteria as defined by Fryer (2012) seem most appropriate as they allow for a focus on the competitive ability of creativity that firms are specifically concerned for. First, these prevailing characteristics include the novelty and originality (Fryer, 2012) of a creative outcome for it to lead to a unique or at least rarely present innovation. Second, the complexity and elaboration (Fryer, 2012) of the creative outcome is considered for the innovation to represent a coherent whole. Third and most important for organizations, is the utility

(Fryer, 2012) of a creative outcome that determines the value the innovation brings to the firm and hence its appropriateness and fit for a problematic situation. This *raison d'être* of the innovation is what competitive organizations are most concerned for. Creativity can be encouraged and employed but whether it leads to a valuable innovation is what makes all the difference when it comes to competitive strength. Realizing the importance of value will determine whether a firm understands to purposefully put creativity to use and will make the very distinction between focused, strategic innovation and indefinite attempts that at best show to have been lucky guesses. To help a firm retain its regard for utility, involving its suppliers is not only the means by which innovation is created but automatically achieves an avoidance mechanism for groupthink. Accordingly, Dahlberg (2007) reasons that especially in the setting of new product development “the judgments, opinions and feedback of ‘the many’ ” assure a wider spectrum of viewpoints on what is useful and what is not. What remains to be put in place for firms which have recognized the vital innovative potential of their suppliers is an approach that exerts and channels this potential towards purposeful innovation by means of creativity (Dahlberg, 2007).

2.3 Internal Processes

Several studies have investigated the drivers that further creativity. Parajanen (2012) characterizes a person's initiative as defining for an active and extraordinary effort of becoming creatively engaged as well as for perseverance in realizing an idea. Intrinsic motivation is the factor whose influence on creativity is most prevalent in the existing literature (Amabile, 2012; Grant & Berry, 2011). Intrinsic motivation embodies the enthusiasm and dedication for a matter, the desire to learn and contribute and is seen as the foundation for novel idea generation (Amabile, 2012; Grant & Berry, 2011). Further, creativity relevant skills such as an ability to think divergent and generative (Fryer, 2012), openness to experience and ideas, applying creative-thinking heuristics, and a persistent work style (Amabile, 2012) builds a logical extension on creativity drivers. The benefit of these skills is that they can be trained and encouraged by external influences (Amabile, 2012) such as social stimulation through coworkers, for instance, or through formal training sessions. In their concept of Componential theory Amabile (2012) includes expertise, technical skill and innate talent in the relevant domain(s) of endeavor as a component affecting the degree of creativity. Remains to investigate what context specific processes a supplier internalizes that enhance the creative engagement for its customer.

2.4 Conditions

In order to get suppliers' internal processes moving towards creative engagement directed towards their customer's mission, it shows essential to provide certain conditions.

Categories. Henke and Zhang (2010) define three larger categories supposedly increasing supplier innovation. First, an early supplier involvement lasting throughout the entire product development process is seen as vital for a successful collaboration. It is argued that through the involvement of both parties in coordinating the cooperation, switching costs are increased for both sides as to mitigate opportunism and enhance value creation for both partners. Second, flowing communication that demonstrates open information and knowledge disclosure provided accurately and in time is described as the basis for a trusting relationship and as enabling a supplier's understanding of its customer's needs. Third, assisting its supplier when possible is explained to not only demonstrate the involvement of the customer but also signals a long term commitment which gives the supplier confidence in its efforts that are a specific investment in the customer after all. Bakker and Demerouti (2007) define more general conditions that facilitate a working atmosphere supportive of creativity. These include proper feedback, an appropriate degree of decision latitude and the necessary social support in order to create an impartial environment in which creative behavior can emerge.

Customer Responsibility. Day (2012) investigated suppliers' expectations towards their preferred customers and found that most of the benefits sought are non-financial. Accordingly, customers who demonstrate their willingness to engage, who communicate openly and honest, who deal with supplier concerns in an efficient and timely manner using a fair, clear and committed approach throughout the relationship, and who ensure timely and accurate payment are sought to be selected by suppliers as worthy to invest in. Hence, a customer is able to create value for its supplier by being an efficient and committed partner throughout the relationship. Wagner (2012) attributes a similar responsibility to the customer to attract and gain the trust and collaboration of their suppliers. Creating and maintaining truly collaborative supplier relationships as well as efficient communication to resolve conflicts and exploit inter-organizational synergies are described as the foundation for supplier involvement. The customer can achieve this by ensuring, for instance, participative decision making, open information sharing, and common goal setting likely to result in high project commitment and thus the engagement of the supplier.

Autonomy, Support and Communication. As for the supplier to be able to reinvent itself or define new ways of working, a certain degree of risk taking may be necessary for which the customer will have to grant sufficient autonomy (Bakker et al., 2007; Parajanen,

2012). As this can only be achieved in a relationship based on trust (Morrison & Phelps, 1999; Parajanen, 2012; Wagner, 2012) good communication must be ensured between the firms (Day, 2012; Parajanen, 2012; Wagner, 2012) in order for each party to understand the intentions of the other. Furthermore, the autonomy granted to the supplier goes hand in hand with the appropriate support (Bakker et al., 2007; Parajanen, 2012; Wagner, 2012). Again, proper communication is necessary to determine where support may be needed and what exactly is expected (Day, 2012; Parajanen, 2012; Wagner, 2012). Additionally, bilateral feedback (Amabile, 2012; Bakker et al., 2007) in order to evaluate the collaboration of a project phase allows for improving and for rewarding each party's contribution to the relationship and ensures that a certain degree of goal sharing is remained (Wagner, 2012).

Extrinsic Rewards. The role of extrinsic reward on motivation and especially intrinsic motivation is still debated (Amabile, 2012). Extrinsic rewards should neither create too much pressure nor too little incentive. In a business relationship where the financial outcome is mostly used as the measure of success, this suggests that buying firms should think about the right profit share for their supplier. An appropriate reward mechanism may need to be defined, that channels the supplier's efforts towards true commitment.

3 Conceptual Framework

Based on the findings of previous studies in creativity and supplier relationships a conceptual model is developed that explains the influence customers can exert on the creative engagement of their suppliers.

3.1 Customer

Parajanen (2012) analyzes group characteristics that make the group conducive to creativity and suggests vital conditions for these characteristics to develop. Seeing the buyer-supplier innovation effort as a team project, intriguing parallels can be extracted from these findings. Here supportive leadership that places confidence in the group and grants an appropriate autonomy to the group is described as an environmental condition. Seeing the customer as the initiator and hence leader of the innovation project team, illustrates its determinative role.

3.2 Supplier

It is assumed that certain internal processes need to be initiated within the supplying firm (Grant and Berry, 2011; Amabile, 2012). These processes are less explicit in nature and difficult for the customer to evaluate. However, they have been found to be indispensable in order for the supplier to become truly committed.

3.3 Developing the Model

Fortunately, the development of these favorable attitudes towards the customer is not left to chance. In fact, the buying firm has the ability and even the responsibility to significantly influence this attitudinal setting of its supplier. Ensuring the conditions that develop and shape these internal processes within its supplier is described as being the primary role of the buying firm in the buyer-supplier innovation effort (Day, Wagner). How the supplier perceives its customer and views the underlying relationship is determining for the degree of engagement it feels towards its customer and hence the level of effort it is willing to perform. Thus a preliminary stage can be added to the model. The conditions created by the customer are hypothesized to indirectly influence the effort for creativity made by the supplier by shaping its internal processes and influencing the perception of its customer. It has been suggested that the social environment as well as the physical work environment directly influence the creative performance of individuals (Amabile, Dul et al.). Hence, the model also hypothesizes that certain conditions have a direct relationship to the level of creative engagement a supplier is willing to commit for its customer. Whether the conditions brought into the relationship by the buying firm first evoke certain creativity favoring or disfavoring processes in the supplier firm or whether they directly increase or decrease the creative performance the supplier makes throughout the project is to be analyzed throughout the case study.

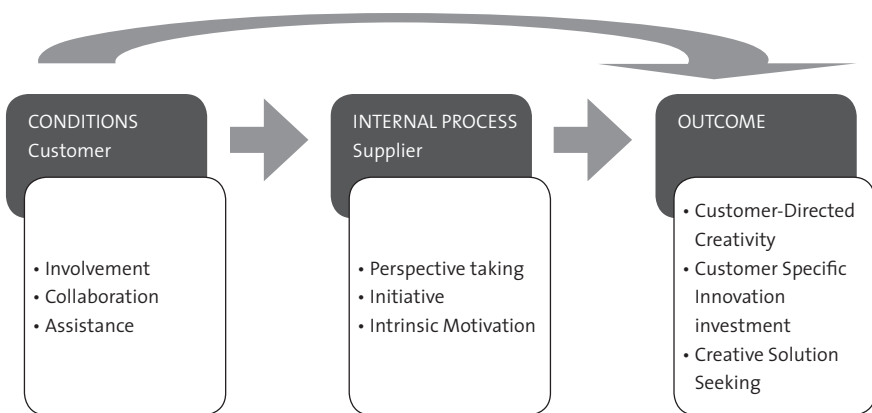


Figure 1: Conceptual Model.

3.4 Conditions

The categories of job resources by Bakker et al. (2007) resemble the areas of buying firm engagement by Henke and Zhang (2010). Departing from these origins three main categories of customer conditions can be derived.

Involvement. First, the customer may demonstrate involvement not only in the shared project but also in the relationship to its supplier by involving suppliers in company processes & product development (Henke and Zhang, 2010). Further, this category may be characterized by a collaborative approach towards decision making beyond project borders, bilateral profit from inter-organizational synergies and signals of long-term commitment.

Collaboration. Second, buying firms can assure effective collaboration by establishing uncomplicated means of communication (Day, 2012), by clarifying expectations and setting shared goals (Wagner, 2012), by being receptive to their supplier's ideas and by challenging them in a constructive way (Parajananen, 2012) as well as by sharing information timely and understandable (Henke et al., 2010).

Assistance. Third, appropriate assistance provided to the supplier in an effective manner can help overcome confusion upon the project requirements and frustration due to uncertainty. Moreover, helping its supplier to improve its competitiveness (Henke et al., 2010) will strengthen the entire supply chain and provide a strong and lasting partner to the buying firm. Assistance can be demonstrated by providing accessible support and appropriate feedback (Amabile, 2012) to the supplier, by granting enough decision latitude and autonomy (Bakker et al., 2007) as to not constrain the supplier, and by giving access to an appropriate level of information (Day, 2012; Smals et al., 2010; Wagner, 2012) in order for it to work efficiently in the interest of the customer. The model thus incorporates involvement, collaboration and assistance as its three main categories of conditions buying firms can provide to their supplier. Each category includes a set of factors that are hypothesized to initiate and develop internal processes within the supplier favorable to creativity and to directing the creative effort towards the buying firm's needs. From previous findings it was possible to extract a diverse set of possible factors and to assign each to one of the categories of the model. However, which factors are most prevalent in each category may be dependent on the basis of the relationship, the inherent firm cultures and respectively the supplier's responsiveness to particular factors.

3.5 Internal Processes

At the supplying Firm C positive relationship setting provided by the buying firm may initiate certain intangible processes that are not directly observable. Rather, they show through the supplier's behavior. Given that these internal processes are a favorable reaction towards the buying firm's contribution, the model focuses on those processes that further the creative engagement.

Intrinsic Motivation. Intrinsic motivation is described as a driver to go beyond the usual performance effort due to a personal enjoyment and interest in the work (Amabile, 2012). The intangible nature of intrinsic motivation makes it difficult to quantify, nevertheless, its presence can be discovered. Buying firms that achieve that their suppliers are interested in and enjoy working for them beyond the financial reward are likely to attain a high level of intrinsic motivation with their supplier. For the supplying firm that enjoys the work initiated by its customer it might come natural to use a creative effort in order to provide superior solutions. This illustrates the relational direction of the model moving from conditions initiated by the customer over internal processes at the supplier towards a creative effort made by the supplier.

Perspective Taking. Perspective taking is assumed to be another internal process. In this case the supplier gradually adopts the perspective of its customer when working on a solution for it (Grant & Berry, 2011). Clearly, by doing so the supplier moves out of its pre-specified role of solely working in its own area of expertise. Moreover, the supplier makes an effort to understand the way of thinking at the buying firm and imagines how its work would fit and be evaluated at the buying firm. The supplier thus moves from simply fulfilling its specified instructions to an attempt to look further into how it can best contribute to the requirements of its customer.

Initiative. A further process playing a significant role in innovation processes has been found to be initiative (Parajanen, 2012). A supplier taking the initiative to move beyond its instructions with the goal of improvement is becoming actively engaged in the solution finding process and likely to use creativity in order to arrive at a solution. Initiative is suggested to be a decisive factor in the later phases of NPD as it involves the intrinsic aspect of motivation where the completion of the idea becomes a matter of personal importance and thus guarantees a persistence to follow the project through (Parajanen, 2012). Accordingly, the model identifies intrinsic motivation, perspective taking and initiative as the main drivers behind creative engagement of supplying firms.

4 Methodology

Based on the findings in the existing literature on creativity and buyer-supplier relationships a model combining these two streams was developed. In order to investigate the appropriateness of fit to reality of the theoretical model a case study was conducted.

4.1 Case Selection

The cases of analysis were chosen upon their ability to provide exemplary information relevant to the investigated topic (Yin, 2009). Due to the density and relevancy of information these two cases provided, the model could be revised and adjusted for these particular cases. The explicative case study design allows for analyzing the many factors and categories on a few units of analyses (Johansson, 2003).

4.2 Data Collection

The interviews were prepared by deriving particular questions that would test each aspect of the model. However, as the interviews were to be conducted in a conversational style rather than a rigid investigation (Yin, 2009), these very detailed questions became the backup material for later clarifications and prompts. For the actual interviews the questions were designed open ended avoiding any leading connotation to them (Yin, 2009). Furthermore, the structure that was remained allowed the respondents to open up with a broad description of their experience within the exemplary project during the grand tour (Yin, 2009) and lead them towards more detailed descriptions of particular situations throughout the mini tour (Yin, 2009).

4.3 Analyzing the Results

The transcribed interview data was analyzed following the nine steps as suggested by Philip Burnard (1991). A list of topics and possible categories was already provided by the results from the literature research reflected in the modeled framework. After re-reading the transcripts, open coding (Yin, 2009) could be applied categorizing the data and grouped according to similar topics. For each factor extracted from the data quotations were selected to provide evidence. Now that the supported factors were subtracted from the interview data, the model could be revised using falsification (Yin, 2009). Factors proposed by the model for which no evidence was found in the interview data could be removed from the model. Hence, only factors for which proof is existing are to remain in the model. Clearly, this suggests that the model becomes very particular to the cases under analysis and is by no means generalizable. A multiple case design (Yin, 2009)

including firms across industries would be necessary in order to filter out general factors influencing the relationships suggested by the model.

5 Data

The data used for providing practical evidence on buyer supplier relationships is drawn from the interviews collected at two case firms. The first case is a Dutch family owned business manufacturing high end design bed systems. For the purpose of the analysis this case is assigned the role of the customer and referred to as Firm C. The second case is a sheet metal processor and parts supplier for Firm C. It is assigned the role of the supplier and referred to as Firm S throughout the analysis.

5.1 Collecting the evidence

In total, four interviews were conducted, three at Firm C and one with Firm S. At Firm C interviewees were represented by the purchasing manager, the strategic purchaser and the product engineer involved in the most recent project with Firm S. At Firm S the interviewee was represented by the key account manager for Firm C. It was thus assured that the interviewed personnel are among those highly involved in the buyer-supplier relationship. Each interview lasted about 30 minutes.

6 Discussion of Results from Interview Data

A careful analysis of the information rich interview data allowed for distinguishing a number of themes that could be categorized. Evidence for a number of factors could thus be backed with quotations of the interviewees. The evidence found largely confirms the conceptualized relationships and the theorized categories of the conceptual model.

6.1 Customer: Conditions

Involvement. Trust was mentioned by all interviewees to be both a direct condition for creativity to emerge as well as an underlying requirement for the supplier to become intrinsically motivated to work creatively. As the product engineer put it

“They know they will get the business. A few years ago they made a prototype and maybe the job went to someone else and now they know we are going to make it. And

they can also think about how to make it and whether it is easy to make it or whether it can be made better.”

Thus the assurance of the business provided by the partnership creates enough trust so that the supplier does not need to worry whether the effort is worth it. On the contrary, the supplier knows that any additional effort can only improve the result and thus the satisfaction with the outcome. As the supplier is interested in satisfying its client in order to secure future business opportunities with them and to strengthen the partnership through positive experiences it will invest in the additional effort of using creativity. Of course, over time, a learning curve can be suspected as both companies get to know each other's capabilities better and know how to collaborate. Firm S consciously witnesses the ongoing improvement in their business relationship to Firm C:

“Last week I was there and we discussed all the things we did not discuss last year in the project that is already closed. That means we are moving forward in getting together and moving forward in the SC towards Firm C.”

The ongoing learning effects that are created through the continuous work are motivating the companies to invest further in the relationship. Here the driver is no longer the past historical investment but the outlook for future growth and possibilities. Hence, For the Involvement category of customer created conditions it can be confirmed that trust is a relevant factor influencing this buyer-supplier relationship. Furthermore, the value created for both parties was named as an important factor by all interviewees alike. The value emerging from the ongoing development of the relationship is described by the strategic purchaser of Firm C:

“It is the principle of not touching their margin, but he can still reduce waste, it's a win-win situation”

The focus lies on the relationship and the development as partners rather than on pure price pressure. Firm S confirms the share in values:

“If you can improve on the process, than you can improve the price.”

Here, it is to be noted that common goals namely to improve the processes during the NPD projects as well as similar perspectives of what is important for the continuity of

the partnership are shared among the companies. Moreover, both companies are making investments specific to this partnership supporting the third factor of involvement, the continuity of the relationship. Opportunistic behavior is often seen as a threat by suppliers when making customer specific investments. The inclusion of Firm S in the SSP program, however, demonstrates Firm C's involvement to an equal degree and ensures the continuity of the business relationship even further. Hence, the continuity factor has an important effect on providing a secure setting to the supplier creating a creativity stimulating environment. Support for the direct value of financial profit and volume of production as described by Smals and Smits (2010) can be found:

"Their sales increased as a result, it helps a lot, that motivates."

Nevertheless, the indirect values of reputation and process capabilities (Smals et al., 2010) are stressed even stronger by both parties. The head of purchasing at Firm C defines the reputational advantage for their supplier:

"We are a supply chain that goes to the customer and this supply chain has the brand Firm C on it. We say you are a preferred supplier for Firm C and this spot is limited."

The advantage of knowing each other's processes and capabilities is described by the strategic purchaser at Firm C:

"When we work closely together, then our engineers know more and more what type of machines he [the supplier] has. We can anticipate, which means we arrive faster at a product that is realizable."

These indirect sources of value are of strategic importance for the partnership. The common effort and shared benefits motivate both parties intrinsically to contribute ideas and creative efforts. Another factor that has emerged from the interview data is the consistency in principles and values. It is described as creating trust with the supplier and as a foundation for improvements:

"When you stick to do what you promise, you will see that it works, that the trust develops."

Accordingly, in the involvement category evidence for a number of factors that can be assured by the buying firm in order to positively influence the supplier's attitude towards creative engagement is found. The involvement category of customer provided conditions thus includes the value provided to the supplier, trust as a basis for the partnership, a consistent and continuous relationship as well as a focus on the development of the partner's strength and capabilities rather than a radical price pressure on the supplier.

Collaboration. The second customer condition category, collaboration, is found to be valid among three factors. First, information is shared in a timely and appropriate manner. According to Firm C the supplier "knows what we know and what we need for the next weeks." However, it was mentioned at Firm S that the involvement into the NPD project could already happen at even earlier stages, allowing for an increase in the match of needs and capabilities. Second, values and goals are aligned between the two companies. Firm C has set four mechanisms in place in order to provide principles for the supplier to join in. These mechanisms include the supplier signing to respect Firm C's core values, its code of conduct which represents the shared values, mandatory participation in the Feedback program, and staying competitive and innovative in the future. All of these mechanisms signal a long-term commitment for the partnership and provide a clear foundation in which Firm C outlines its general expectations on how business will be conducted. However, Firm C also assures that goals on a more specific and operational level are matched. The company provides its supplier with up to date forecasts on demand expectations and clear deadlines from the beginning on. Furthermore, the ideas collected throughout the Feedback program are transferred into clear goals for improvement on which both companies work together. Third, selecting a preferred supplier based upon prior positive experiences allows for choosing suppliers with whom congruence in values and a match in firm culture exists. Hence, by choosing the right supplier that matches Firm C's expectations towards a good partner initially, the foundation for a successful development is created. Accordingly, Firm C's strategic purchaser confirms:

"Congruence in product development and smooth cooperation was a determining criterion in the partner selection."

Respectively, the interviewee at Firm S declared:

"We believe in the philosophy of Firm C. We work together on a strong Supply Chain."

Assistance. In the assistance category supporting evidence for the role of three factors in shaping the supplier's attitude towards creative engagement is found. The first factor, appropriate and honest feedback, is formally implemented with the Feedback program and further strengthened through open communication throughout the project. Feedback plays a vital role on building on the initial congruence between the firms. Only through honest feedback can both firms learn each other's viewpoints. Feedback flowing from the customer to the supplier is thus allowing the supplier to gain a deeper understanding of its customer's perspective on what ought to be improved. Feedback flowing from the supplier to the customer allows for the customer to gain a deeper understanding of its supplier's requirements in order to improve. It is noteworthy that the feedback is not only limited to an operational level concerning the specific project but can also address the organizational aspect of the partnership as to how to improve processes and procedures. This illustrates the long-term commitment as both parties are adopting a future outlook and hence also perceive each other's feedback as useful for their further collaboration. The second factor, support, is assured by assigning an entire team consisting of product and project engineers, the purchasing function, and the product function to the supplier project. Hence, the supplier always knows whom to contact and where to find answers in case of further information needs or unforeseen complications. By having an entire team of specialists involved in the supplier project, Firm C ensures that the contact persons are knowledgeable about the supplier's inquiries and can provide rapid assistance. According to Firm C's strategic purchaser involvement was high to provide support:

"It was a continuous communication. Their engineers were working closely together with ours."

The third factor, autonomy and decision latitude was supported to the degree that the supplier has a free hand on deciding on how to best produce a certain part as long as it fulfills the specifications. This leaves enough room for the supplier to stay within their capabilities and to apply creative solution seeking in case of challenging requests. Firm C's head of procurement confirms that the degree of autonomy granted is dependent on the trust prevalent within the relationship:

"The trust in production capacity was there, trust in management was there, and it was enough to say now we also let them do the engineering."

6.2 Supplier: Internal Processes

Evidence for a number of internal supplier processes could be found in the interview data from all respondents.

Motivation. That Firm S was intrinsically motivated showed for the interviewees at Firm C through its willingness to put in extra hours without pointing them out and through their willingness to work faster for Firm C than for other customers. Firm S explained their motivation to be due to a belief in Firm C's philosophy and their products, moreover, speaking of an eagerness to work for Firm C. Clearly, these motivations are attributable to the relationship and congruence in business principles. Hence, it can be confirmed that the good fit of both companies increases the intrinsic motivation at Firm S to find faster and better ways of working for their customer.

Perspective Taking. Perspective taking was explained by all respondents as resulting mainly from the close collaboration of the engineering teams from both companies and the long history of their relationship.

"Firm S thinks in our shoes. You don't have to explain everything."

is how Firm C's product engineer described the level of perspective taking at Firm S. This process is further strengthened and initiated throughout the Feedback program. At Firm S it was also confirmed that gaining better insights into Firm C's perspective allows the supplier to work more independent and to initiate changes themselves. Moreover, the process of adapting its customer's perspective is described as a continuous development process where improvements are noted with each project.

Initiative. Initiative during the latest project was described by Firm C's product engineer on the fact that the supplier took over the part of making the drawings, which was new to both companies. Furthermore, the additional efforts and active implementation of improvement suggestions shows the initiative the supplier takes. It was mentioned at Firm S that by today 13 ideas that emerged from the Feedback program have already been started. Part of the supplier's initiative is its willingness to align its goals with these of its customer. According to Firm S's product engineer, the company is "working very hard together to reach the Feedback target every year." This willingness of active collaboration and implementation of changes at its own company demonstrates high commitment and motivation.

Extrinsic Rewards. Of course, part of that motivation is derived extrinsically:

“Also, it gives us work and a certain amount of money every year, of course. That is what keeps us in the business.”

Nevertheless, the connotation of that extrinsic motivation is rather positive and constructive as Firm C’s strategic purchaser puts it:

“I think it was a great success with Firm S. Their sales increased as a result, it helps a lot, that motivates.”

Trust. Nevertheless, the development of trust is seen by all respondents as the main driver and initiator for the supplier’s engagement. Awareness for the presence of trust within the relationship is clearly stated:

“In order to work truly innovative a basis of trust has to exist and did so for our partnership.”

Open Communication. A further process that was recognized by Firm C was the willingness to communicate openly:

“When you keep knowledge to yourself you cannot achieve the optimum. You simply have to talk openly with each other. It is important to share knowledge and be open.”

Certainly, this is a reciprocal process and it is difficult to determine its origins. However, it can be assumed that the basis of trust and congruence in values lead to a better understanding simplifying open communication.

Creativity Skills. At both companies it became clear that Firm S possesses the creativity relevant skills. Firm C’s head of procurement noted:

“They are really innovative. It is nice to see. They use machines in a certain way which is really innovative. In order to produce special things they are really creative and really customer oriented.”

However, this should be seen less as an internal process than as a result of all these processes. The capability to engage creatively is clearly present at Firm S. Nevertheless, the willingness of the supplier to actually use these capabilities in the interest of their customer is required. As the model suggest the previously outlined internal processes create this willingness within the supplying firm. The satisfactory success of Firm C and Firm S's partnership and the witnessed improvements confirm the modeled relationships.

6.3 Managerial Implications

The Firm C Supplier Selection Program acts as a frame in signaling the strengthened commitment to the relationship. Moreover, suppliers becoming part of the SSP program are given an advance in trust compared to a regular supplier. Only when it is harmed too many times controlling efforts are increasing.

Trust. Throughout all the interviews trust kept emerging as the underlying factor influencing most of the processes and contributions to the partnership touched upon. Observing the strong role of trust in this buyer-supplier relationship it is tempting to generalize from this example to others. Even though it makes logical sense that a certain degree of trust is required in every business relationship with the goal to innovate together. Nevertheless, the absence of any other comparison does not allow for generalizing the relationship of trust on supplier's creative engagement. Thus it is only possible to point at existing studies on supplier relationships of which some have identified trust as important for the relationship in general.

Proactive Approach to Risk. On a local scale it may suffice to grant trust in the beginning of the business relationship. It would be interesting, however, to see how effective the trust mechanism works on an international scale where values diverge strongly and business partners are no longer easily observable. Firm C has already recognized the challenge and is anticipating measures evaluating tools with which to monitor, evaluate, and mitigate risks in sustainability and ethical compliance. A realistic view is adopted by recognizing that it is impossible to anticipate every potential risk. Rather the aim is to protect as good as possible by providing the accurate conditions.

Consistency. Having recognized the importance of trust, it is strengthened by moving away from exerting price pressure on the supplier. Firm C's head of procurement explained that it took them several reassurances until Firm S was ready to believe that they did not want to cut their margin. Only by truly sticking to their promise and showing Firm S how they expect them to arrive at improved prices, Firm C was able to gain Firm S's trust and collaboration.

Formal Feedback System. The formal system on feedback and idea development instituted by the Feedback program signals to Firm S how committed and interested Firm C is in helping the company improve their processes as well as their partnership in order to arrive at better prices and a more efficient collaboration. Firm C is thus committed to put formal systems and structures in place in order to help their supplier to create ideas and to provide incentives to become creatively engaged. Additionally, Firm C assures assistance and support accessible through these structures which simplified by the consequential improving relationship. The more natural communication becomes and the easier the supplier can access its customer's information, the more fluent does the entire collaboration process become. As a result the projects move more uncomplicated and faster in time. Moreover, creative engagement will be naturally included rather than explicitly demanded, it simply becomes part of the suppliers daily efforts for its customer.

Autonomy and Support. From the interview with Firm S it became clear that the Feedback program is highly appreciated for the opportunity it grants to suggest improvements in the process. Priority for improvement in the context of Early Supplier Involvement showed to be a desired increase in autonomy for the product design and development phases. According to Firm S's product engineer the possibility to perform changes directly would shorten the time needed for production and improve the time to market for the entire project. For this purpose, closer collaboration with Firm C's engineering department is desired so that the engineers at Firm S can gain a greater understanding of how the part they produce functions in the final end product. It was suggested to receive a Stepfile of the holistic product design, so that functionality on the total product level can be better understood and considered when designing the component. Firm S's desire for more decision latitude on the one side and the need for closer collaboration on the other side illustrate how granting more autonomy goes hand in hand with providing appropriate support.

6.4 Research Implications

The two cases depict an exemplary buyer-supplier relationship where innovations have already been successfully created and that is now in the process of refining its collaboration. Important factors such as goal sharing, congruence in values, initial commitment and involvement were revealed to be essential conditions to be assured by the buying firm in order to create an environment favorable for the supplier's creative engagement. Among all these factors, the trust between the two partners seems to have the highest value in the relationship. It became clear that trust is essential for granting autonomy, for sharing information and for investing in the relationship in order to

develop a long term commitment and for providing lasting value to both parties. Through its SSP program Firm C selects its preferred suppliers and signals commitment. The ESI initiates close collaboration which is constantly improved through the Feedback program. Hence, Firm C does not only provide a basis for the relationship it also gives room and opportunities for the relationship to develop and improve according to the supplier's ideas. The company has recognized that an integral approach is needed to tap the full potential of its supplier's capabilities and that both firms can profit through collaboration. By taking of the pressure on Firm S's margins and by integrating Firm S into its supplier program, Firm C ensures all the relevant conditions and involves its supplier into a committed and innovative relationship. Moreover, being able to gain insights in the supplier's view on the relationship, it was possible to see how these conditions affect the supplier's attitude. Hence, perspective taking, trust and intrinsic motivation could be observed to be mainly influenced by the conditions provided by Firm C, triggering the creative engagement at Firm S. In the context of the two cases studied, the conceptual model is proven relevant and finds support for a number of factors.

7 Limitations

Due to the limited number of cases investigated for this study a number of limitations have to be considered when interpreting and concluding upon the results. First of all, the firms embedded in a real life economic environment cannot be analyzed as cases in an isolated state of the world. This means that influencing or lurking variables cannot be controlled for and are thus a potential bias possibly undetected throughout the data analysis. However, this real life setting grants an advantage just as well, as it allows for more practical implications to be drawn from the findings. Additionally it may help to avoid the construction of a mode that is too abstract to be applicable. Second, the scope of the research does not only question the generalizability of the findings, it clearly prohibits it. This may be the main drawback of using only a limited amount of cases, as each observation is highly specific and elements that show to be common among the cases investigated cannot be trusted to be relevant in the same way for other potential cases as they may underlie different environmental specifications. Hence, a particularly required setting would have to be specified for the findings to be generalized within that setting. However, even for such an attempt of framing an environmental setting the scope of the case study is too small and its relevance thus suspected to be highly particular. Third, the cases are specific to the time of interrogation (Johansson, 2003), especially the industry

conditions and environmental trends of that time. Hence, their relevance may change when these external factors change. Similarly, some of the factors detected in these cases may be unique to the firm's industry or relationship setting. In order to filter for generally applicable factors a case study involving multiple cases across different industries would have to be conducted. Only then can commonalities be portrayed and a generalizability of these common factors be determined. This may be the approach to be undertaken in future research on a larger scope.

8 Conclusion

"Creativity is the front end of Innovation" (Sloane, 2012) and should thus be highly valued by companies trying to benefit from their suppliers' innovation potential. An integral approach towards supplier relationship management not only secures potential innovation benefits but strengthens the entire supply chain over the long term. By creating conditions that favor a supplier's creative engagement the likelihood of becoming a customer of choice for which the supplier is motivated to innovate increases with every commitment effort made. The developed conceptual model depicts which commitment efforts are valued by the supplier and what happens at the supplier consequently. From the case study practical implications are drawn so that direct suggestions on how to implement the favorable conditions can be derived. In particular, building trust, formally ensuring commitment, and providing communication and feedback devices have proven as vitally shaping the relationship between the two case firms. Moreover, both firms not only became committed partners but already benefited from successful innovations developed in cooperation and largely influenced through the creative effort of the supplying firm. It should thus be in the interest of dynamic and influential companies to provide favorable conditions for the creative development of their suppliers. The resulting innovations have the potential to provide a source of competitive advantages and improve the cost structure so far as to influence the entire supply chain they operate in.

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