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The Utilisation of Strategic Buyer-Supplier Relationships to Effectively Manage Supplier Quality:

A Supplier Categorisation Approach

By

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Abstract

Title: The utilisation of strategic buyer-supplier relationships to effectively manage supplier quality: a supplier categorisation approach

Purpose: The purpose of this thesis is to identify valid supplier categories based upon the varying significance of key variables in strategic buyer-supplier relationships, with the aim to effectively manage supplier quality.

Methodology: The thesis follows a deductive, quantitative research approach. A web-based questionnaire is considered the appropriate method to reach a sufficient number of suppliers in an efficient way. The questionnaire examines the characteristics of the relationship between the buying organisation and its suppliers, with the focus on measuring the identified key variables in buyer-supplier relationships.

Theoretical Perspectives: Both the research areas of buyer-supplier relationships and quality management were subject to increased attention by researchers. By combining these two fields of research, the focus is drawn towards the affiliation between them. The introduced conceptual framework illustrates this connection and utilises the seven key variables to demonstrate the relationship between the buying organisation and its suppliers.

Empirical Foundation: The study's empirical findings are based upon 93 supplying companies that supply to the same buying organisation and operate in the wood and wood-aluminium industry.

Conclusion:

The findings demonstrate notable variances between dimensions in some of the identified supplier categories, supporting the notion that suppliers should not be treated as identical by practitioners nor in literature. More specifically, it is found in this study that the two supplier categories distinguishing between small, medium and large suppliers, and service, direct- and indirect material suppliers can be considered as valid categories for managing strategic buyer-supplier relationships, and in turn supplier quality.

Keywords: Buyer-Supplier Relationships, Empirical Study, Supplier Categorisation, Supplier Relationships Management, Supplier Quality Development, Quality Management.

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List of Abbreviations

ANOVA	Analysis of Variance
BA:	Business Area
ISO	International Standard Organisation
RBV:	Resource Based View
RQ:	Relationship Quality
QM:	Quality Management
SCM:	Supply Chain Management
SCQM:	Supply Chain Quality Management
SQA:	Supplier Quality Assurance
TCE:	Transaction Cost Economics
TQM:	Total Quality Management

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1 Introduction

"Quality is never an accident. It is always the result of intelligent effort"
- John Ruskin

As outstanding quality production is increasingly recognised as a source of competitive advantage, researchers and managers have accordingly shifted their attention towards quality management (Flynn, Schroeder and Sakakibara, 1995). One concept that thereby has been progressively explored, is the relationship between buying and supplying organisations. This thesis focuses on one buying company and its supplier relationships, which depicts a practical example of an organisation that is confronted with these developments. The background aims to introduce the pertinent concepts of quality management and buyer-supplier relationships.

1.1 Introduction to Quality Management

The concept of quality management appeared during the industrialisation period between 1900 and 1940. The main objective of quality management at that time was delivering goods with sufficient quality to avoid customer claims and complaints, which implied high costs for the manufacturers. Consequently, manufacturers tried to achieve cost reduction by exploiting the mass production opportunities by reducing the variety of products (Weckenmann, Akkasoglu and Werner, 2015). One typical example was the Ford T-Model, which was the first car manufactured through the utilisation of the assembly line approach. Because of this cost-effective production method, the Model T enjoyed a widespread popularity (Anawalt, 2016).

Nevertheless, quality focus widened over time and quality control practices at the source of production were found to be more cost-efficient than settling customer claims. From 1960 onwards, quality awareness further expanded. The increased consciousness around prevention of potential problems and risks extended the spectrum of quality assurance practices, in addition to the already existing post-production processes and quality control measures. Yet, these methods were constructed solely from an organisational point of view (Weckenmann et al., 2015).

Around 1980, customer focus received increased attention, which implied quality planning with customer orientation. Hence, one of the biggest problems could be avoided, namely the production of technically innovative products which there was no demand for (Weckenmann et al., 2015). Juran (1988) claims that supplementing the organisation focused view with a customer focused view stimulated the prevention of quality problems. Along with enhanced competition, the intricacy of producing and supplying goods surged (Weckenmann et al., 2015). Consequently, manufacturing companies have become increasingly dependent on the reliability of suppliers to fulfil increased quality requirements by the customers (Elshaer and Augustyn, 2014; Flynn et al., 1995). Hence, the nexus of companies became more complex and the management of relationships more challenging. Subsequently, documentation, standardisation and certification of suppliers such as ISO 9000 series became a necessity to define basic requirements of quality (Weckenmann et al., 2015). Because of this, the quality management perspective as well as supplier management has received increased attention from both managers and the business management literature (Fynes and Voss, 2002).

A primary example is the publication of Noshad and Awasthi (2015), who conducted a comprehensive review of literature and industry practices regarding quality management concerning suppliers. Noshad and Awasthi (2015) aimed to demonstrate the main steps, prevalent methodologies, concepts, tools and techniques found in theory and practice. Most of the analysed literature is concerned with supplier quality evaluation, implementation of quality tools and supplier relationships.

The relationship between buyers and suppliers experienced a change in perception in recent decades (Trent and Monczka, 1999; Spekman, Kamauff and Myhr, 1998), which is discussed in the following section. Buyer-supplier relationship is a term that is frequently found in the literature and henceforth also is applied in this thesis (Sang Chin, Yeung and Fai Pun, 2006; Fynes and Voss, 2002; Spekman et al., 1998; Corsten and Felde, 2005).

1.2 An Introduction to Buyer-Supplier Relationships

Wang (2004) discusses two forms of interaction between buyers and suppliers. First, buyer-supplier relationships are mentioned, which are described as a long-term cooperative initiative which involves trust, mutual commitment and a shared sense of strategic direction with the purpose of achieving constant quality improvements (Lo and Yeung, 2004).
Nevertheless, not all forms of interaction are based upon a relationship. The more basic connection is in the literature termed as arm's length relationships, which are explicitly determined in a contract where tasks and duties of both parties are defined. These relationships involve a single specific and discrete transaction (Wang, 2004). However, this study focuses on buyer-supplier relationships, as it offers greater potential for quality improvements (Wang, 2004).

In the 1980s, most companies believed that the way of managing suppliers exerted little influence on their overall performance, due to the notion that suppliers might take unilateral advantage of the dependence of buyers. Therefore, most of the buyers in organisations expressed a mistrust in their suppliers (Trent and Monczka, 1999). Nevertheless, a handful authors indicated and surveyed changes in this perception during the recent decades. Spekman (1988) calls the shift from arm's length contracts towards increased collaboration a "quiet revolution". This quiet revolution implied a trend away from solely arm's length commitments between buyers and suppliers, to a relationship where strategic and value-adding tasks were used to reduce cycle times and ultimately create a competitive advantage (Bedey, Eklund, Najafi, Wahrén and Westerlund, 2009; Trent and Monczka, 1999). Similarly, price has become a less essential feature in the relationship between buyer and supplier. To create and sustain a competitive advantage, firms rely on the competencies and commitment of their suppliers more than on price. This implies that price has become more of a consequence of closer collaboration between buyers and suppliers, instead of being the primary driver of their relationship (Spekman, 1988).
Factors such as competitive pressure, increased consideration of sustainability, risk factors and pressure to constantly reduce costs, stimulated the development from an adversarial transaction-oriented relation towards a collaborative-oriented relation between buyers and suppliers (Lambert and Schwieterman, 2012; Moeller, Fassnacht and Klose, 2006; Frödell, 2011). This shift from a mere transaction-oriented collaboration to a relationship-oriented perspective of cooperation

triggered the increased strategic importance of buyer-supplier relations necessary to achieve a competitive advantage by co-creating value. Moreover, close and successful collaboration with suppliers can have a positive impact on inevitable inventories, personnel costs in purchasing, cost savings for the buyer and business relations (Moeller et al., 2006). Regarding this change in perception of the traditional views and the evolving benefits of buyer-supplier relationships, the importance of the development and maintenance of these relationships emerged to be a crucial component and source of competitive advantage for companies (Nagati and Rebolledo, 2013).

To sum up, two research areas and their development have been introduced in this section.
First, the increasingly progressive perception of quality management as a competitive advantage was touched upon. Second, the trend towards increased collaboration between buyers and suppliers was discussed. While literature about these individual fields of research has been prevalent, the conjunction of buyer-supplier relationships and quality management offers potential for further empirical research. The next section addresses this problematization and the forthcoming aims and objectives of this study.

1.3 Aims and Objectives

By combining the two fields of research addressed in the introduction, the focus is drawn towards the affiliation between them. This in turn raises the inevitable question of how buyer-supplier relationships affect the quality of supplied goods and services. Hence, there is a need to establish the affiliation between quality and buyer-supplier relationships. Some scholars have addressed this connection between quality and supplier relationships theoretically or empirically such as Lee and Li (2018), Corsten and Felde (2005), Kaynak and Hartley (2008), Sang Chin et al., (2006) Dorgelo (2000), Lo and Yeung (2004) and Fynes and Voss (2002).

Thereafter, if this link is established, it is required to understand the key variables of a successful buyer-supplier relationship. By determining and understanding these key variables, a foundation for empirically testing buyer-supplier relationships is provided. It should be noted however, that the literature concerning buyer-supplier relationships treats all suppliers as identical. Since not all supplying organisations can be expected to have identical preconditions and attributes, they may

value some key variables in buyer-supplier relationships differently. It can thus be ineffective to manage all of them similarly. Therefore, there is a need to distinguish suppliers into categories that are relevant to for the company and industry in question, by determining the difference in significance of each of the seven key variables between the dimensions of potential supplier categories. This distinction allows for buyer-supplier relationships to be managed more effectively, with the purpose of ultimately improving supplier quality. This problematization raises the following research question:

"How can the categorisation of suppliers in strategic buyer-supplier relationships be utilised to manage supplier quality?"

As the research question suggests, this thesis aims to study the significance of buyer-supplier relationships as a method for managing the quality of supplied goods and services. Moreover, the distinction is made between diverse supplier categories, which allows for an empirical contribution to the existing field of research. As such, this thesis is based upon the following objectives:

- *Demonstrate the connection between buyer-supplier relationships and supplier quality management.*
- *Develop a conceptual framework based upon the identified key variables in buyer-supplier relationships.*
- *Demonstrate patterns and variances between dimensions of potential supplier categories.*
- *Identify valid supplier categories relevant in specific buyer-supplier relationships based upon the utilisation of the key variables.*

The aim is to address the first objective through the literature review conducted in chapter two, and develop the conceptual framework based on the findings. The development of the conceptual framework is essential to achieve the last two objectives. These two last objectives are accomplished through a quantitative study with a selective group of suppliers of the buying company, which is introduced in section 3.5. By addressing these four objectives, ultimately the research question is answered.

1.4 Research purpose

This thesis aims to make a twofold contribution. First, the empirical research conducted in this study aims to add to the existing body of literature concerning buyer-supplier relationships by building upon the paper of Fynes and Voss (2002). On the other hand, the results of the empirical research contribute practical insights for manufacturing organisations to manage supplier relationships.

1.5 Research Limitations

Derived from the research question and the scope of this thesis, four primary limitations are acknowledged. First, the buyer-supplier relationships that are discussed are subject to one buying company and its suppliers. This implies the inquiry of only the suppliers' perspectives to examine the buyer-supplier relationships with the buyer, as it is considered inefficient for the buyer to assess its relationship with each supplier. However, this allows for the comparison between buyer-supplier relationships as there is one constant denominator, namely the buying organisation. Second, only strategic buyer-supplier relationships and their effect on quality management are examined in this study. Other forms of collaboration and alliances are neglected and can be a source for further research. Third, this thesis will not further elaborate on other mechanisms that might influence the quality of supplied goods and services such as legal enforcement and price mechanisms. Lastly, although other supplier categorisation approaches yet exist in the literature and might have provided valuable insights, this thesis aims to categorise suppliers according to industry specific requirements and based upon the results of the empirical research. Thus, the amount of supplier categorisation possibilities discussed in this study are limited.

1.6 Outline of the thesis

The subsequent chapters are structured as follows: chapter two provides a comprehensive evaluation of the literature relevant to the topic. In the literature review, a funnelling approach

first addresses the overarching fields of Supply Chain Management and Transaction Cost Economics, before discussing Modes of Collaboration existing on the continuum between markets and hierarchies, with an emphasis on Strategic Buyer-Supplier Relationships. Thereafter, the connection is made between Strategic Buyer-Supplier Relationships and quality-related literature; Supply Chain Quality Management and Supplier Quality Management. Chapter three examines the methodological approach applied in this thesis. In chapter four, the main findings are presented and analysed. These findings are then discussed in chapter five. Lastly, chapter six concludes the main findings, reflects on the research aim and objectives and indicates the consequential practical implications.

2 Literature Review

The following literature review establishes an analytical summary of a meticulous selected body of existing research. The purpose of the literature review is to discover what already has been accomplished within this research field and create an understanding of what can be contributed. Although the literature and empirical research about quality management and supplier relationship management is rich and widespread, the selected literature is considered highly relevant to this study and advances the ability to establish an understanding and learn from previous research.

Competition has come to exist between whole supply chains, and not solely between firms anymore (Foster Jr., 2008). Moreover, quality is thus managed throughout these entire supply chains (Lo and Yeung, 2004). Therefore, this literature review commences with introducing the concept of Supply Chain Management. This is required as it comprehensively illustrates the spectrum of organisations that can affect quality in a supply chain. Secondly, a theoretical magnifying glass focuses on the "make-or-buy" decision of a firm and its underlying theory, Transaction Cost Economics Theory (TCE) (Williamson, 1975, 1981). The TCE literature is reviewed as the make-or-buy decision influences the network of involved organisations in the supply chain. Thereafter, based upon the categorisation made by Oxley (1997), the different forms of collaboration on the continuum between market and hierarchy are examined. The form of collaboration that receives the most attention in this literature review is the buyer-supplier relationship, since quality-related literature emphasises its importance in the development of supplier quality. Lastly, the focus is shifted towards quality management literature, which supports the previous mentioned argument about the emphasis of quality-related literature on buyer-supplier relationships. Figure 2.1 illustrates the created "universe" of the literature review.

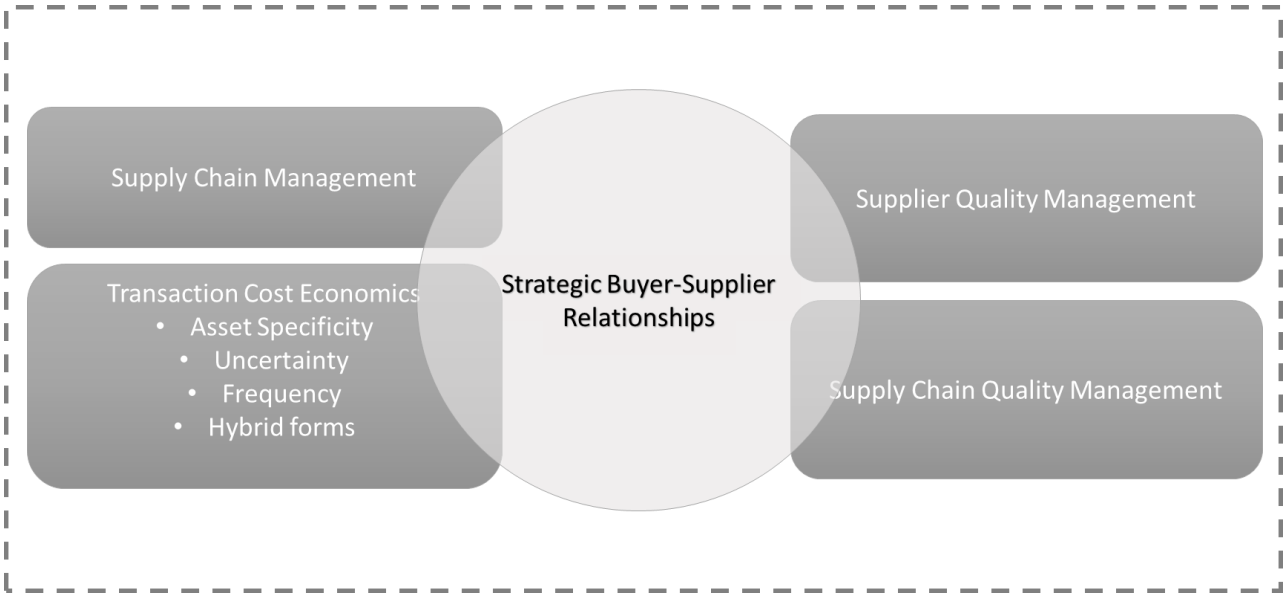

Figure 2.1 Literature Review Framework

2.1 Supply Chain and Supply Chain Management

During the era of globalisation, the term Supply Chain Management (SCM) increasingly gained popularity in business. Consequently, numerous definitions of supply chain management emerged. Different approaches of definitions were proposed by Monczka, Petersen, Handfield and Ragatz (1998) La Londe and Masters (1994), Stevens (1989), Houlihan (1988), Jones and Riley (1985) and Cooper, Lambert and Pagh (1997). Nevertheless, before SCM can be understood, there is a need to explain the concept of supply chain. In general, the supply chain of a product or service involves the flow of components and raw materials to the end-consumer by surpassing multiple stages such as product assemblers and retail merchants. Transportation and warehousing companies, which connect the different stages are members of the supply chain as well. To put it differently, a supply chain is a network of organisations entailing upstream and downstream linkages to produce value for the end-consumer in a cost-efficient way. Organisations are usually part of more than one supply chain (Mentzer, DeWitt, Keebler, Min, Nix, Smith and Zacharia, 2001).

To illustrate the relation between supply chain and supply chain management it can be acknowledged that a supply chain exists whether it is actively managed or not. (Mentzer et al. 2001). Supply chains have always been in existence, even if the term “supply chain” was not.

However, during recent decades organisations increasingly started to actively manage the upstream and downstream linkages along the supply chain to achieve cost advantages and raise revenues by gaining a competitive advantage (Mentzer et al., 2001; Spekman et al. 1998).

Fueled by this trend, Mentzer et al. (2001) proposed one comprehensive solution to define supply chain management as*:* "*the systematic, static coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole" (*Mentzer et al., 2001, p.18).

Additionally, the concept of SCM displays a paradigm change of cooperation. Whereas historically cooperation was limited to two contracting organisations, the paradigm change establishes an extended cooperation along the entire supply chain (Spekman et al., 1998).

This transition is recognised as a linear development which requires a mind-set change and strategic reorientation for all supply chain partners to move from price-based discussions to cooperation and coordination. To achieve this, increased trust, commitment, information sharing as well as long-term strategic intentions between organisations is required. It is acknowledged that this generally already is achieved by many companies (Spekman et al., 1998). The purpose of managing a supply chain is to achieve the lowest initial purchasing price and assuring the supply and quality of goods, services and components. This can ultimately lead to a sustainable competitive advantage (Spekman et al., 1998). However, to obtain quality standards for the end customer, appropriate raw materials and components are required throughout the whole supply chain (González-Benito, Martínez-Lorente and Dale, 2003).

Consequently, supply chain management has a lot of communalities with Transaction Cost Economics theory, but also tensions are shared by the two concepts (Williamson, 2008). However, Flynn and Flynn (2005) claim that although TCE is a proven theory in various contexts, it might not provide the right perspective on supply chain management. TCE puts its emphasis on costs such as negotiating, adjusting and monitoring agreements along the supply chain. Relevant aspects such as quality are largely neglected.

Although the relevance of TCE for quality performance is doubtful due to a sole focus on costs, it is required to introduce Transaction Cost Economics in this literature review. The necessity to introduce it is based upon the notion that the make-or-buy decision has an impact on the interconnected networks, which can be portrayed as shortening or extending the supply chain.

The governance decision in TCE therefore affects the quality of goods and services, as quality is managed throughout the entire supply chain (Lo and Yeung, 2004).

2.2 Transaction Cost Economics (TCE)

Inspired by the work of Coase (1937), Williamson (1975, 1981) describes the theory of Transaction Cost Economics (TCE), where the transaction is recognised as the "*basic unit of analysis*" in a firm and underlines the fundamentality of economising the related costs. This can be achieved by designating transactions to specific governance structures, allowing for the recognition of firm boundaries between markets and hierarchies. Williamson (1981, p. 552) further states that "*a transaction occurs when a good or service is transferred across a technologically separable interface. One stage of activity terminates, and another begins.*" The Transaction Cost Economics theory assesses how smoothly these transfers occur and compares the transaction costs that are involved between diverse governance structures (Williamson, 1981).

Williamson (1981) defines three levels of analysis in relation to TCE. The first area addresses the structure of the firm and how the existing operational parts of the company are connected. Next, and most relevant to this thesis, TCE touches upon the firm boundaries. This involves the decision of which goods or services to acquire from an external party and which to produce within the organisation. This is referred to as the make-or-buy decision. The third and final level handles the organisation of human assets. TCE combines features of economics, organisational theory and contract law with the purpose of creating a comprehensive approach for the studying of organisations (Williamson, 1981).

The examination of the make-or-buy decision is relevant to this thesis as it determines whether a firm's quality performance becomes dependent upon other organisations or not (Lo and Yeung, 2004). This requires the inquiry of the factors that drive the make-or-buy decision. Asset specificity, uncertainty, and the frequency of transaction occurrence are named as the three vital dimensions for establishing the cost of a transaction (Williamson, 1981). As such, these three dimensions are key in the make-or-buy decision and are reviewed in more detail in the following sections.

2.2.1 Asset Specificity

Williamson (1981) considers the degree of asset specificity as a critical factor of TCE, a view that is supported by Tadelis and Williamson (2010). However, whereas Williamson (1981) mentions only site, physical asset and human asset specificity as potential forms of asset specificity, Tadelis and Williamson (2010) add dedicated, brand name capital and temporal specificity to this list. They do however, agree upon the notion that high asset specificity results in less alternative sources or users for the item in question. Consequently, since TCE assumes that agents are susceptible to bounded rationality, an asset specific investment creates greater transaction costs due to increased opportunism hazards. Therefore, as firms strive for minimal transaction costs, this influences the decision of whether to produce a good or service internally, as opposed to purchasing it from an external party. As such, both Williamson (1981) and Tadelis and Williamson (2010) portrait asset specificity as a vital dimension of the make-or-buy decision.

A different perspective on this topic is provided by Dyer (1997), who questions the premise that an increase in asset specificity unavoidably results in higher transaction costs. Dyer (1997) divides transaction costs in four different categories: search costs, contracting costs, monitoring costs and enforcement costs. Based upon empirical evidence, trust and goodwill are then introduced as self-enforcing mechanisms which can serve as alternative measures for controlling opportunism, instead of using legal contracts to do this. According to Dyer (1997), the creation of trust and goodwill as mechanisms to guard a firm against opportunism hazards come paired with higher short-term costs in comparison to using legal contracts. However, long-term costs will experience a decrease as a firm can enjoy the benefits of these self-enforcing mechanisms for an undefined period, whereas legal contracts are subject to renewal costs when the end of the contract period is reached. Supported by this logic, Dyer (1997) challenges the views of Williamson (1981) and Tadelis and Williamson (2010) through offering another perspective on the role of asset specificity in the Transaction Cost Economics theory.

Nevertheless, Dyer's (1997) arguments do not invalidate the notion that asset specificity is a critical dimension in the determination of transaction costs. In other words, if asset specificity is low, the need for enforcing mechanisms would be lower than when asset specificity is high. Therefore, it is recognised as a key factor in the make-or-buy decision.

2.2.2 Uncertainty

In addition to asset specificity, Williamson (1981) and Tadelis and Williamson (2010) also define uncertainty as a factor that influences the transaction costs of an organisation. Uncertainty affects the establishment of firm boundaries, as it becomes more compelling to integrate an activity into the organisation instead of purchasing from an external supplier in a highly uncertain environment. However, differing views exist on the importance of uncertainty as a sole factor. Williamson (1979) contends that the degree of uncertainty is only relevant when asset specificity for an investment is high. If asset specificity is low, new trading partners are found easily. High uncertainty does not alter this.

Martynov and Schepker (2017) in contrast, argue that risk aversion also makes uncertainty a relevant factor, even in the absence of high asset specificity. The assumption of bounded rationality is criticised, as it implies that all agents are risk neutral, which is deemed unrealistic. Accordingly, Martynov and Schepker (2017) distinguish between risk-seeking, risk-neutral and risk-averse human agents. The argument is made that risk-averse decision-makers perceive transaction costs to be higher under uncertain circumstances than their counterparts who are risk-neutral or risk-seeking, since they are more sensitive to losses than possible financial gains. Thus, scholars seem to consistently argue for the irrelevance of uncertainty as a single driver of transaction costs, but do not consent over the factors that have to be present to make it relevant in the make-or-buy decision.

Additionally, according to Hillman, Withers and Collins (2009), an organisation can alter the degree of uncertainty that exists in its environment. Instead of transactions, the Resource Dependency Theory perceives firms as the main component of analysis and establishes that firms share interdependencies with other organisations in their environment (Pfeffer and Salancik, 1978). Hillman et al. (2009) revises five strategies that an organisation can pursue to reduce interdependencies and uncertainty, which originally were proposed by Pfeffer and Salancik (1978). Thus, Hillman et al. (2009) and Pfeffer and Salancik (1978) contend that external contingencies can be decreased through the utilisation of mergers, joint ventures, board of directors, politics and the succession of executives. Casciaro and Piskorski (2005) further extend the theory by dividing interdependence into power imbalance and mutual dependence, which is

claimed to have contrasting effects on the effectiveness of mergers as a dependency-reducing measure.

Interestingly, Hillman et al. (2009) and Pfeffer and Salancik (1978) also recognise other interorganizational relationships as a part of the abovementioned joint venture strategy to reduce uncertainty and interdependencies. Among others, strategic alliances and buyer-supplier relationships are argued to be tools that can partly absorb interdependencies, and thus affect transaction costs (Hillman et al., 2009). These interorganisational relationships are introduced and elaborated on in section 2.3.

2.2.3 Frequency

Williamson (1979) categorises the frequency of occurrence for a transaction in three categories. These categories are one time, occasional and recurring transactions. Only occasional and recurring transactions are relevant to TCE according to Williamson (1979), as transactions that only occur once are rare. However, the frequency of transactions does affect the costs of the firms. This is because recurring transactions imply increased contract enforcement costs, monitoring costs and frequent negotiations with contracting partners. Therefore, highly frequent transactions tend to be internalised into the firm (Williamson, 1985). Kulkarni and Heriot (1999) use the frequency of transactions to describe a trade-off situation between different costs in inventory management. The trade-off exists between information costs of ordering, such as invoices and payment information, and information costs concerning the storage of goods. In other words, information costs regarding the ordering of goods increase as the frequency of market transactions rise. On the other hand, this simultaneously implies the decline of storage information costs, creating a need to compromise. The frequency of transactions is therefore a crucial dimension in the make-or-buy decision.

The frequency of transactions was also used to survey the cooperative norms in supplier buyer relationships. Cai and Yang (2008) found that frequency of transactions is a crucial factor for the development of cooperative norms. They propose to look for opportunities to frequently interact with the contracting firm and consequently establish these collaborative norms (Cai and Yang, 2008).

To summarise, these dimensions of asset specificity, uncertainty and frequency of transactions are critical drivers of transaction costs, and thus the make-or-buy decision. As expressed by Williamson (1975, 1981) cost savings can be achieved by undertaking activities within the firm instead of externally. As a firm grows there comes a point when the external market becomes a less costly alternative (Tricker, 2012). When a firm turns to the market, a portal is established between the internal functions and external supplier to create value for customers (Moeller et al., 2008). On the other hand, this also implies that the quality that this firm delivers becomes partially dependent on other organisations in the supply chain (Lo and Yeung, 2004).

Market and hierarchy display only polar points on a continuum of collaboration levels however. To manage the transaction costs that arise from asset specificity, uncertainty and frequency, several forms of collaboration emerged in literature and practice (Oxley, 1997). As they drift between market and hierarchy, these hybrid forms of collaboration provide for alternative options to manage the transaction costs. Moreover, the difference in the degree of integration of supply chain members between the forms of collaboration can affect quality performance (Kaynak and Hartley, 2008).
The following section introduces the hybrid forms of collaboration, which all can be categorised under the overarching concept of strategic alliances.

2.3 Strategic Alliances

Strategic alliances illustrate a combination of characteristics of internalisation and market exchanges, since they partially internalise an exchange (Oxley, 1997). Yet, two predominant governance directions concerning alliances are found. Horizontal alliances are alliances among two suppliers with the purpose of collectively adding value to the companies' operations by transferring best practices and jointly engaging in product development (Lazzarini, Claro and Mesquita, 2008). However, this study's empirical research is based upon a buying organisation and its suppliers, thus reflecting the second type of alliance defined as vertical alliances. This second type of alliance deals with the relationship between buyers and suppliers and its impact on the performance of the allying companies (Lazzarini et al., 2008). Regardless the form of alliance, contracts are a fundamental requirement to collaborate, as they are necessary to further

coordinate joint activities (Das and Teng, 2000). Rindfleisch and Heide (1997) claim that governance structures are not meant to be framed in a continuum, but rather in form of a trichotomy of distinct governance forms: joint ventures, unilateral and bilateral modes of governance. This trichotomy was also used by other scholars such as Das and Teng (2000) and Mowery, Oxley and Silverman (1996) and is used in this section to distinguish between market, hierarchy and strategic alliances.

However, strategic alliances continue to exist as a continuum between market and hierarchy. Different forms of strategic alliances are introduced as several hybrid forms have evolved over time (Oxley, 1997). Strategic alliances can be defined as formulated strategies with the aim of achieving a competitive advantage by entering into agreements with companies that possess mutually-complementary resources or capacities. In achieving a competitive advantage, the organisations share resources (e.g. knowledge) or cooperate closely with one another (Cho and Hambrick, 2006). In relation to the degree of collaboration and integration on the scale between market and hierarchy, different forms of strategic alliances emerged. This section therefore introduces the three categories that scholars name in the continuum of strategic alliances. The three categories are called unilateral contract-based alliances, bilateral contract-based alliances and equity joint ventures and are discussed below. Nevertheless, it is acknowledged that additional governance forms exist.

One additional possibility is the acquisition of knowledge and human capital in form of a merger or acquisition of another organisation. The acquisition of a direct competitor can result in increased market power. Yet, M&As are effortful events for organisations regarding future uncertainties. The integration process is complicated, and several stages must be completed for the merger or acquisition to be considered successful. Moreover, acquiring another firm is accompanied with vast investments, with no guarantee that the acquiring company will therefore improve its performance (Larsson and Finkelstein, 1999). However, since M&As are a hierarchical governance form, they are not further elaborated upon in this literature review.

Based upon the reviewed literature, figure 2.2 illustrates the continuum between market and hierarchy and the hybrid forms lying in between. Scholars emphasise several different factors affecting the decision of which form of strategic alliance to pursue. For instance, Oxley (1997) addresses the role of intellectual property leakages, termed appropriability hazards, in the choice

between market or hierarchy. Thus, as high appropriability hazards emerge from difficulties in concluding specialised contracts for technology as well as monitoring activities, more hierarchical alliances are preferred (Oxley, 1997). Das and Teng (2000) examined resource-based characteristics of firms on the formation of alliances and compares the resource-based view (RBV) with Transaction Cost Economics Theory.

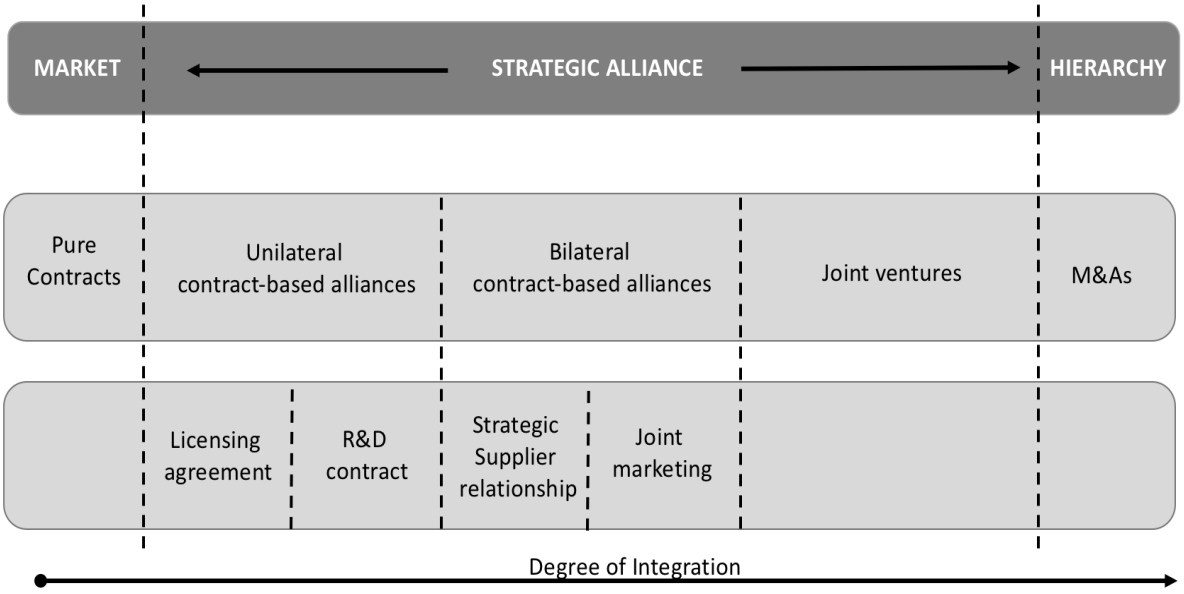

Figure 2.2 Forms of Strategic Alliances

2.3.1 Unilateral Contract-Based Alliances

This form of collaboration is established when a contract based upon knowledge transfer is concluded. Das and Teng (2000) expressed it as "technology for cash" exchanges. The main forms are licensing agreements, distribution agreements and R&D contracts and entail the opportunity for firms to individually execute obligations independently. Unilateral contract-based alliances require the partnering organisation to perform on their own, with a low level of coordination and collaboration from the contractor. The intent of either parties is mainly to contribute property-based resources to the alliance (Das and Teng, 2000). Thus, unilateral contract-based alliances depict a low level of integration and can notionally be positioned close to the "market" governance structure. However, this form of contracts surpasses the minimum level of independence since a contract is agreed, which implies that there a first step towards

"hierarchy" is taken (Mowery et al., 1996). Nevertheless, the nature of this form of collaboration offers little potential for quality development. This argument is supported by the literature, since quality management is largely neglected.

2.3.2 Equity Joint Venture

Joint ventures display the highest degree of integration with high autonomy and rather low independence. Therefore, joint ventures are the hybrid forms that most closely resembles the hierarchy governance structure (Oxley, 1997). The term "joint venture" means the creation of a new entity by a joint investment of two organisations in a strategic alliance and can thus be characterised as capital alliances (Gulati, 1998). It is meant to provide an advantageous way for companies to acquire tacit knowledge, know-how and human capital. Pearce (1997) stated additional advantages of joint ventures, such as increased efficiency and enhancement of market power. Scholars distinguish in strategic alliance theories between property-based resources and knowledge-based resources. This distinction is particularly important for joint ventures, since advantages of a joint venture are limited if mainly property-based resources are provided by the partnering organisation (Das and Teng, 2000). However, by establishing a new entity while keeping their operations as they are, joint venture alliances might imply opportunistic behaviour by pursuing one's own interests which could be disadvantageous for the other partner, especially if tacit knowledge and know-how are involved (Das and Teng 2000). Power asymmetry and lack of consensus regarding the objectives of the joint venture account for additional factors that increase the risk of failure (Pearce, 1997). Because of this complex nature, organisations with a medium or large supply base cannot use joint ventures as a tool for managing quality. Therefore, the form of collaboration that exists in between unilateral contract-based alliances and joint ventures is reviewed next.

2.3.3 Bilateral Contract-Based Alliances

Strategic alliances that share a sustained production of property rights can be defined as bilateral contract-based alliances. This contractual alliance requires both organisations to provide resources and work together on a constant and long-term basis, which ties them together and enhances the mutual integration (Das and Teng 2000).

Mowery et al. (1996) consider joint marketing and strategic buyer-supplier relationships as examples of bilateral contract-based alliances, where literature particularly mentions strategic buyer-supplier relationships in the context of quality management (Corsten and Felde, 2005; Fynes and Voss, 2002); Lo and Yeung, 2004). In view of the continuum between market and hierarchy, bilateral contract-based alliances build the median, and therefore construct a compromise between independence and autonomy. One relevant alliance in view of bilateral contract-based alliances is entering into cooperative agreements with the aim to achieve mutual strategic objectives (Das and Teng, 1998). Spekman (1988) contends that these cooperative agreements received increased attention in the literature in recent decades, due to a "quiet revolution". This quiet revolution implied a trend towards strategic relationships and value-adding tasks, such as quality improvements, to create a competitive advantage (Bedey, 2009; Trent and Monczka, 1999).

Tanskanen, Ahola, Aminoff, Kaipia, Kauppi, and Bragge (2014) refer to this increased cooperating partnership as strategic buyer-supplier relations, which obtain a focal attention in this thesis and are discussed in more detail in the next section.

2.4 Strategic Buyer-Supplier relationships

As stated in the introduction, Noshad and Awasthi (2015) discussed in their publication that besides quality tools, committing resources, training and supplier rewards, buyer-supplier relationships are increasingly addressed in the literature as a method to develop quality, which also appears frequently in quality-related literature. Scholars from different quality-related research areas, such as Sang Chin et al. (2006) and Lo and Yeung (2004), agree upon the notion that buyer-supplier relationships, as a part of strategic alliances, have a positive effect on supplier quality. These quality-related research areas are reviewed in the sections 2.4 and 2.5.

Buyer-supplier relationships are expressed as cooperative initiatives with a long-term perspective, which build upon trust, mutual commitment and a joint strategic direction to achieve benefits such as quality improvements (Lo and Yeung, 2004). The nature of buyer-supplier relationships has undergone substantial changes in the last decades. Conventional contracts between buyers and suppliers to fulfil their own interest got substituted by closer joint action collaboration (Heide

and John, 1990). This change was acknowledged by several different scholars such as Lambert and Schwieterman (2012), Moeller et al. (2008) and Frödell (2011). Regardless which product or service is subject to the contract, organisations always must manage the relationship with the provider.

The levels of collaboration that characterise these relationships are expressed in different levels of involvement (Prahalad and Hamel, 1990). If both the buyer and the supplier intend to leverage the relationship to gain a competitive advantage, a strategic buyer-supplier relationship is established (Tanskanen et al., 2014). Similar to Tanskanen et al. (2014), Jack and Powers (2015) stated that strategic buyer-supplier relationships imply the focal firm to select suppliers with similar objectives to strive for joint success. These similar objectives are based upon the strategies of either firms (Jack and Powers, 2015). Well-managed strategic buyer-supplier relationships connect customers, manufacturers and suppliers, and play a vital role in the long-term well-being of the overall supply chain (Sarkis and Talluri, 2002; Ting and Cho, 2008)
Therefore, this trend of closer collaboration resulted in the emergence of strategic buyer-supplier relationships, which rely on different variables that influence the strength and success of the relationship. Before these variables are examined, the following section first addresses the benefits and drawbacks of strategic buyer-supplier relationships.

2.4.1 Benefits and Disadvantages of Strategic Buyer-Supplier Relationships

Lambert and Schwieterman (2012) demonstrate how supplier relationship management can have a positive impact on the net profits of a firm. First, revenue streams of an organisation are positively affected by methods such as buyer-supplier relationship management. This can improve product quality, which enables organisations to charge higher prices and achieve higher levels of customer satisfaction, resulting in an increase in sales. Jack and Powers (2015) agree with this notion and concluded that strategic buyer-supplier relationships are positively correlated with quality of products and services. The alignment of strategic objectives and cooperation among supply chain members allows organisations to better manage quality. As this is highly relevant to the research purpose of this study, section 2.4 and 2.5 elaborate on the correlation between buyer-supplier relationships and quality management in more detail.

Second, cost of goods sold are positively affected by strategic buyer-supplier relationships, because of increased efficiency and effectiveness in processes. Furthermore, improved planning and reduction in material costs through less expediting of materials can be achieved. Similarly, total expense reduction can be achieved by several factors such as: lower order management costs, decreased general overhead and administrative costs, and a reduction in a freight and warehousing costs. As a result, an increased net profit is leveraged by the introduction of strategic buyer-supplier relationship management (Lambert and Schwieterman, 2012). Kalwani and Narayandas (1995) depict one attempt to analyse the implications of long-term relationships for supplier organisations and found that firms can reduce their inventory and control costs by establishing long-term relationships with suppliers. Furthermore, Lawson, Cousins, Handfield, and Petersen (2009) examined the links between socialisation mechanisms, supplier integration and supplier responsiveness on buyer performance. It was found that supplier integration had the largest impact on cost savings. Consequently, the establishment of joint investments between organisations result in the possibility to derive greater benefits from collaboration.

What is more, mutual dependence might increase joint investment benefits such as the alignment of organisational systems. Knowledge sharing is conveyed to increased responsiveness, which leads to a decreased time-to-market (Lawson et al., 2009). In addition, during a long-term relationship, buyers benefit from an increased understanding of their suppliers' needs. According to Kalwani and Narayandas (1995), this ultimately leads to an increase in profitability.

To sum up, it can be concluded that the reviewed buyer-supplier relationship literature present numerous advantages that benefit both the buying firm and the supplying firm, as revealed by Kalwani and Narayandas (1995). On the other hand, it is required to acknowledge the disadvantages and negative sides to buyer-supplier relationships as well. Han, Wilson and Dant (1993) examined the drawbacks of buyer-supplier relationships in an empirical study. A first drawback may be the omittance of better exchange alternatives with more attractive suppliers in the future, due to irrevocable investments made with one supplier. Second, Han et al. (1993) discussed that over-dependence can lead to serious disadvantages for the dependent partner, due to the exploitation hazard. Therefore, over-dependence implies a significant drawback. From the perspective of the suppliers, the conflict over prices was perceived as the biggest drawback of

close relationships (Han et al.,1993). The literature about the negative sides of buyer-supplier relationships is very limited however.

Although these drawbacks are evident, managing buyer-supplier relationships successfully implicate significant benefits, such as quality enhancements. To enjoy these benefits and manage buyer-supplier relationships successfully, multiple variables must be taken into consideration. The following section discusses these variables.

2.4.2 Variables of the Buyer-Supplier Relationship

The strength and success of a buyer-supplier relationship is depending on a number of variables, which have a significant impact on either contractual parties. Fynes and Voss (2002) propose a framework with the seven variables examined in this section. These variables illustrate the relationship strength between buyers and suppliers. Fynes and Voss (2002) conclude that this in turn affects quality performance. A notion that also is supported by this literature review (section 2.4 and 2.5).

Numerous other scholars conducted empirical research about these variables in relation to buyer-supplier relationships, as reviewed in this section. This body of research provides therefore a foundation to empirically test the research question of this thesis. The seven identified variables: *adaptation, commitment, communication, cooperation, interdependence, satisfaction and trust* build the foundation for the empirical research in this thesis. What is more, these variables have a compelling positive interrelationship and reinforce each other with respect to buyer-supplier relationships (Mohr and Spekman, 1994; Monczka, Callahan and Nichols, 1995). Figure 2.3 illustrates the seven identified variables in between buyers and suppliers and shows the bilateral influence on the variables.

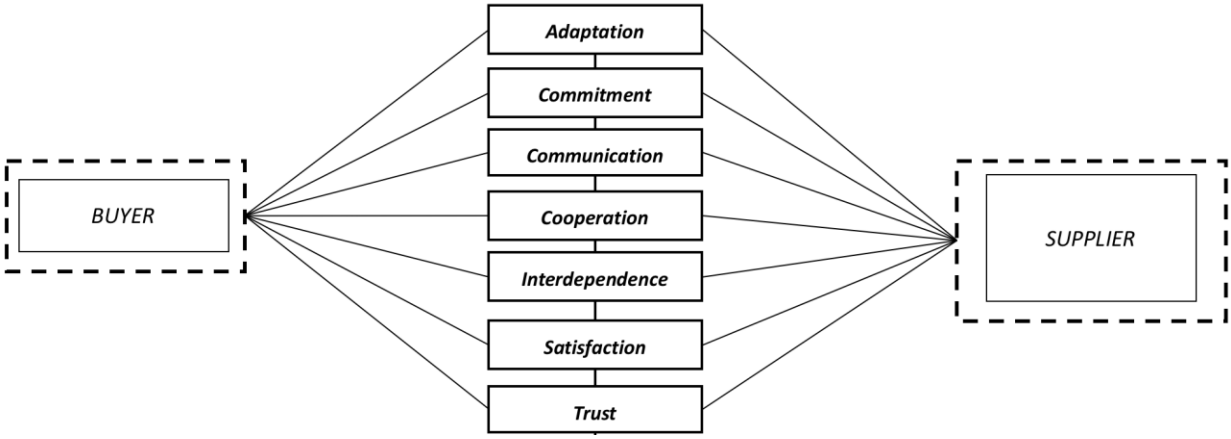

Figure 2.3 Conceptual Framework without Quality

Trends in recent decades have shown that buyers intend to cooperate closely with some selected supplier firms, with the aim to secure important technologies and resources. (Moeller et al., 2006; Trent and Monczka, 1999; Kalwani and Narayandas, 1995). Consequently, a higher degree of trust is necessary, which in turn initiates the crucial challenge of coordinating between trust and dependence. The purpose is to create a fruitful relationship to improve performance (Laaksonen, Pajunen, and Kulmala, 2008). *Trust* can be defined as: "*The willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party"* (Mayer, Davis and Schoorman, 1995, p.712) and is affected by various factors like goal consistency, specific investment, communication and opportunism (Liu and Zhang, 2010). Both the supplier and the buyer must show trust if the strategic buyer-supplier relationships can become a success (Laaksonen et al., 2008), but literature about mutual trust is limited. A number of scholars focused on the trust from solely a supplier's perspective: Johnston, McCutcheon, Stuart and Kerwood (2003); Nagati and Rebolledo (2013) and Handfield and Bechtel (2002).

Commitment can be defined as collaboration with two exchanging organisations with the implicit or explicit promise of relational continuity (Dwyer, Schurr and Oh, 1987). Dwyer et al. (1987) utilise commitment as the fourth step in his supplier integration model. Fynes and Voss (2002) on the other hand, define commitment as a mutual willingness to contribute to the cooperation with the purpose of initiating a long-term relationship to face future unexpected challenges.

Closely related to commitment is the *adaptation* dimension of supplier-buyer relationships (Hallén, Johanson and Seyed-Mohamed, 1991). Hallén et al. (1991) names adaptation an important feature in the dynamics of buyer-supplier relationships. Adaptation can either be executed unilateral through power or dependence or bilateral in exchange processes between organisations. Even if adaptation might imply investment, it can be expected to create a positive return in the short-term or in the long-term Hallén et al. (1991).

Dependence illustrates the extent to which an organisation must maintain a relationship to reach the desired objectives (Jiang, Henneberg andNaudé, 2011). Dependence can be based on the Transaction Cost Economics theory and the degree of the different variables: asset specificity, uncertainty and frequency (Williamson, 1981). Thus, the higher the degree of the variables, the more dependent are buyers on the suppliers and vice versa. Trust and dependence can co-evolve in buyer-supplier relationships and depict that both dependence and trust are important factors when studying interfirm relationships (Laaksonen et al., 2008).

Fynes and Voss (2002) define *cooperation* as companies that work together for the achievement of mutual objectives. Lo and Yeung (2004) also identify cooperation as the ability to jointly work towards a common goal, such as quality improvement, and achieve benefit for all involved parties. Furthermore, increased cooperation allows organisations to transfer technology and personnel, which reduces the cognitive distance between the cooperating firms (Squire, Cousins and Brown, 2009). However, this cooperation does not necessarily need to be a harmonious approach with unconditional trust. Importantly, cooperation as a sole factor does not mitigate any potential opportunistic behaviour (De Toni, Nassimbeni and Tonchia, 1994).

Satisfaction is another dimension that was researched by scholars in the relationship between buyers and suppliers. Selnes (1998) evidenced satisfaction as an important factor to achieve relationship continuity and enhancement. Furthermore, satisfaction is positively related to trust, because the dissatisfaction about a product ultimately decreases trust in a buyer-supplier relationship (Selnes, 1998). From a supplier's perspective, satisfaction involves the sense of fairness regarding the buyer's compensations in relation to the contributions made (Essig and Amann, 2009). Additionally, Fynes and Voss (2002) state that relationship satisfaction can be considered as profitable, rewarding and value adding.

Finally, *communication* indicates the final variable considered in this literature review. One of the originators in view of the strategic buyer-supplier relationship literature was Robert E. Spekman. He found that communication, besides other attributes of the partnership, is a key factor for relationship success (Spekman, 1988). Moreover, communication quality, the degree of information sharing, and joint planning and goal setting were identified by Mohr and Spekman (1994) as the three aspects of successful communication. Anderson and Narus (1990, p.44) define communication as *"the formal as well as informal sharing of meaningful and timely information between firms".* According to Krause and Ellram (1997), communication is an essential variable for successful buyer-supplier relationships and poor execution of communication diminishes the supplier development process. Kaynak and Hartley (2008) further contend that communication within the supply chain about quality-related issues can benefit performance. This formal and informal information sharing is therefore essential for successful relationships (Fynes and Voss, 2002).

As mentioned earlier, these variables have a reinforcing influence on each other illustrate the relationship strength between buyers and suppliers (Fynes and Voss, 2002). Nevertheless, quality has so far been largely neglected in this literature review. Therefore, the next section reviews the supplier quality management and supply chain quality management literature, which identify buyer-supplier relationships as a crucial factor of strategic alliances, and therefore have a positive effect on supplier quality.

2.5 Supplier Quality Management

González-Benito et al. (2003) define supplier quality assurance (SQA) as the insurance of a sufficient stream of resources that deliver value to the firm in exchange for money, uphold to a certain level of quality and are delivered at the correct point in time. This implies that costs should not be the sole dominating criteria of supplier selection. Moreover, González-Benito et al. (2003) initially propose ten variables that are associated with the degree of supplier quality assurance practices implemented in an organisation, which are categorised into four clusters.

One cluster contains the variables related to the product features. This includes the asset specificity of a good, the importance of a component to the production process of the firm, and

the costs that are incurred during the purchasing process in relation to the end value of the product. The next cluster covers the two variables related to the firm, which are the size and global presence of the organisation. Thirdly, supplier-related characteristics are grouped together. As with the firm-related characteristics, size is mentioned as a variable. The degree of dedication of a supplier towards a certain industry is taken into consideration as well. Lastly, in the fourth cluster González-Benito et al. (2003) suggest a positive effect of SQA practices on the procurement operations. Furthermore, a parallel is drawn between internal and external quality assurance activities, where internal activities refer to production quality assurance and external activities to supplier quality assurance.

Based upon empirical evidence, González-Benito et al. (2003) find that all but two propositions are confirmed. No clear evidence is provided for the establishment of a correlation between the implementation of supplier quality assurance practices and the size of the supplier, nor the size of the firm. However, this model is lacking the interrelationship between the different clusters. The effects clusters have on each other are not described. This is contrasting with other literature in the supplier quality management research field.

For instance, a different perspective is provided by Dorgelo (2000), who perceives that controlling the quality delivered by suppliers and the definition of quality conditions form the pillars of supplier quality assurance. Supported by empirical evidence, it is found that through the engagement of suppliers in the product development process of the buyer, quality issues during production can be reduced and realistic quality standards can be determined. However, as this requires the building of trust between the supplier and buyer, it is an approach that entails caution and patience, making it difficult to implement within a short time period (Dorgelo, 2000).

To manage and improve the quality delivered by suppliers, three mechanisms are put forward by Lee and Li (2018). The first mechanism, termed inspection, is the controlling of incoming goods and components. The advantage of using inspection as a mechanism to manage supplier quality, is that buyers can detect any existing shortcomings upon arrival of the materials, avoiding the transfer of faulty goods into the production process or to eventual end consumers. Hereby, buyers are also enabled to hold the responsible supplier accountable. Next, the use of incentives is

mentioned, which is deemed useful for stimulating supplier quality practices that are difficult for the buyer to observe directly. The last mechanism that is stated by Lee and Li (2018) is the investment of the buyer in its suppliers, with the purpose of improving the quality standards of those suppliers through cooperative initiatives. The argument is made that the quality of the goods leaving the company is best managed by utilising inspection, while the other two mechanisms can regulate the quality of inbound materials and components.

Lee and Li (2018) further recognise the importance of the compatibility of buyer and supplier efforts, and distinguish between activities that undermine, complement or strengthen the efforts of the other party. Based upon the mechanisms and this categorisation of efforts, four strategies that a buyer can pursue to enhance supplier quality are presented. Three of those strategies each emphasise the utilisation of one mechanism, whereas the fourth strategy attempts to exploit the advantages of all three mechanisms simultaneously.

Sang Chin et al. (2006) provide a different approach towards supplier quality management than Lee and Li (2018) and put a greater emphasis on the relationship between the buyer and the supplier. More generally, Sang Chin et al. (2006) group the critical features of supplier quality management into three overarching terms, which are strategic alliance, supplier development and supplier monitoring. Two critical features are categorised under strategic alliance, the above-mentioned buyer-supplier partnership and the sharing of information. Hence, strategic alliance focuses on the long-term cooperation between a buyer and its suppliers, and its importance for supplier quality management. This implies the creation of trust, mutual dependence and the division of both benefits and risks. Sourcing strategies, supplier evaluation and supplier motivation are specified under supplier development. Supplier development has similar characteristics to the investment mechanism described by Lee and Li (2018), as it concentrates on improving the competences of a supplier. Finally, supplier monitoring involves the process of measuring and benchmarking supplier performances. Also, it includes a critical feature that addresses the ability to conserve or advance the existing relationships between buyers and suppliers, and in turn improve the suppliers' capacities. The figure below shows a simplification of the model that Sang Chin et al. (2006) provide to create an overview of these critical features.

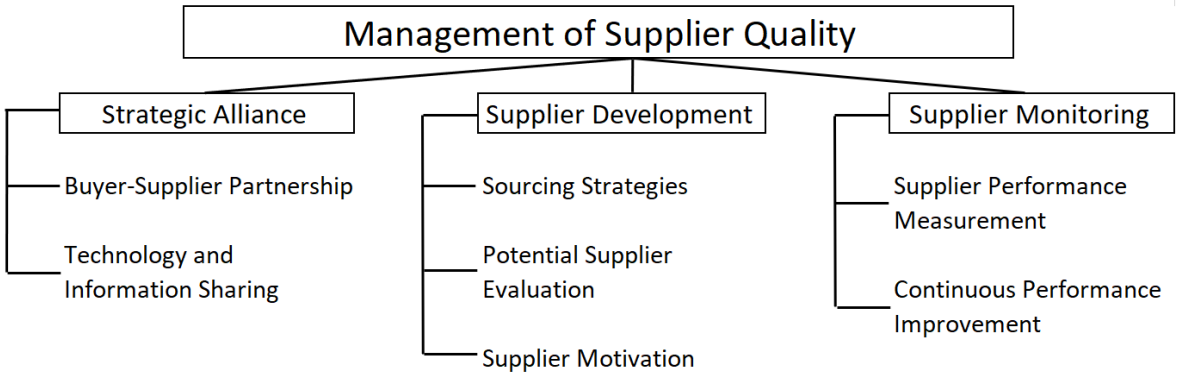

Figure 2.4 Simplified Supplier Quality Management Model

Thus, in contrast with González-Benito et al. (2003), other researchers such as Dorgelo (2000), Lee and Li (2018) and Sang Chin et al. (2006) do emphasise the interaction between the buyer and supplier to manage quality. Moreover, they argue for the importance of engagement and cooperation between both parties. Thus, it is explicitly and implicitly implied in the literature that a relationship between the buyer and supplier can positively influence supplier quality management. This is a trend that also is apparent in the supply chain quality management literature.

2.6 Supply Chain Quality Management

Some of the SCM literature focuses on the relation between supply chain management and quality management. Foster Jr. (2008) presents the term of supply chain quality management (SCQM) and defines it as *"a systems-based approach to performance improvement that leverages opportunities created by upstream and downstream linkages with suppliers and customers"* (Foster Jr., 2008, p. 461). Furthermore, the topics Foster Jr. (2008) found to be essential to SCQM are summed up. Consistent with the claims of Dorgelo (2000), Lee and Li (2018) and Sang Chin et al. (2006), buyer-supplier relationships are stated as a fundamental subject, in addition to customer focus, quality practices and business results. Leadership, HR practices and safety are mentioned as well, but are less frequently researched in relation to SCQM (Foster Jr., 2008). Therefore, these concepts are omitted from this literature review.

2.6.1 Buyer-Supplier Relationships

Lo and Yeung (2004) contend that forming strategic alliances can be used as an instrument to positively influence supplier quality. The concept of strategic alliance is subdivided into supplier selection, development and integration, where long-term buyer-supplier relationships are a feature comprised in the latter phase. Lo and Yeung (2004) find that, next to supplier development management and continuous improvement, the buyer-supplier relationship is a critical component of strategic alliances. Building further upon this argument, an example is provided where quality assurance is obtained through the development of strategic partnerships between manufacturers and suppliers. Furthermore, it is stated that long-term interactive supplier relations and early involvement of suppliers in product development phases is necessary for achieving fruitful strategic alliances. This does imply that suppliers are required to be well-informed about the buyer's processes and operations however.

2.6.2 Quality Practices

Quality practice is a broadly and vaguely defined concept in the SCQM and Quality Management (QM) literature. Labelling it as a universal notion that can be applied in many different settings, Nilsson, Johnson and Gustafsson (2001) recognise employee management, process orientation and customer orientation as the three groups of quality practices. Kaynak and Hartley (2008) take an entirely different approach and present eight individual quality management practices, including customer focus and product or service design. Fyres and Voss (2002) offer additional alternatives and mention quality practices such as top management support, supplier involvement and workforce management. These different perspectives and contributions to the literature give the impression that the scope of quality is lacking a widespread accepted consensus.

2.6.3 Customer Focus

As stated, Kaynak and Hartley (2008) distinguish customer focus, in addition to supply chain management, as a quality management practice. With this notion, a link is created between the SCQM literature and QM literature. Customer focus is explained as involving consumers in the design process to ultimately increase client satisfaction. Hence, Kaynak and Hartley (2008) stress the importance of communication and cooperation with members of the supply chain in relation

to quality. Similarly, Lo and Yeung (2004) address customer focus as a tool for anticipating on the changing needs of consumers, hence increasing customer satisfaction.

2.6.4 Business Results

Nilsson et al. (2001) empirically researches the effects of quality practices on firm performance, which is referred to as business results, and differentiate between performance for product organisations and performance for service organisations. It is stated that employee management has a greater influence on service organisations' performance than on the performance of product organisations. However, in contrast with the findings of Edvardsson, Johnson, Gustafsson and Strandvik (2000), customer satisfaction was found to have a slightly stronger bearing on the business results of product organisations, than on the performance of service organisations. Kaynak and Hartley (2008) do not distinguish between product and service performance but do establish a strong connection between the eight researched quality practices and firm performance.

2.7 ISO Certification

Besides other methods and tools to maintain quality, the ISO 9000 certification series is a set of minimum standards for quality control systems and production processes. This standardisation aims to achieve mutual benefits for buyers and their suppliers due to the compliance of certain requirements regarding quality performance (Rao Tummala and Tang, 1996). Worth noting however, is that ISO 9000 does not guarantee a better quality of the products of an organisation, which is a common misconception according to Singels, Ruël and van de Water, (2001). A better notion is that ISO 9000 certification has the objective to assure quality consistency rather than mere product and service quality. Furthermore, the scholars raise the issue that ISO certification might be triggered by external pressure from buying companies. External pressure to become ISO certified does not support performance improvement. Supplying companies need an internal motivation to effectively make use of ISO 9000 (Singels et al., 2001). Since the buying

organisation in this study does not require ISO 9000 certification and does not exert any external pressure, ISO 9000 certification might thus have an influence on their suppliers.

However, as mentioned above, what becomes evident in these different quality-related fields of research is the emphasis on buyer-supplier relationships. The supplier quality management literature and supply chain quality management literature have several distinctive focal points, but the relationship between buyer and supplier is an overlapping point of emphasis. This allows for the conclusion that the buyer-supplier relationship is a crucial concept in the quality-related literature and an important tool for supplier quality management.

2.8 Conceptual Framework

Figure 2.4 presents the conceptual framework that is developed from the literature review and applied in this thesis. Based on the analysis of existing empirical and theoretical literature regarding buyer-supplier relationships and quality management, a connection between these is established. As emphasised in the previous sections, the focus of this thesis are the seven critical variables in buyer-supplier relationships identified in the literature review. The variables construct the focal point of the conceptual framework and are illustrated as the connection between buyers and suppliers. Other meddling factors in the buyer-supplier relationship, such as price, are omitted from the conceptual framework as a consequence of the shift towards increased collaboration, as discussed in section 1.2.

The aim is first to create an understanding of how variables are utilised differently between suppliers and establish supplier categories based upon this understanding. Second, it is to identify which variables are perceived to be more important than others to successfully manage buyer-supplier relationships. The developed framework permits to capture the interrelations between buyers and suppliers, given the notion that the successful management of buyer-supplier relationships increases quality.

By reviewing relevant literature, the first two objectives defined in section 1.3 are achieved and are illustrated in the conceptual framework. First, the selected literature in the review demonstrated the connection between buyer-supplier relationship and quality management by identifying buyer-supplier relationships as one overlapping point in supplier quality management

and supply chain quality management literature. Buyer-supplier relationships proved to be a tool for managing supplier quality. Second, the literature identified seven key buyer-supplier relationship variables: trust, dependence, adaptation, communication, commitment, satisfaction and cooperation, which construct the core of the conceptual framework (see. Figure 2.4). With the developed conceptual framework, the foundation of the empirical research is created.

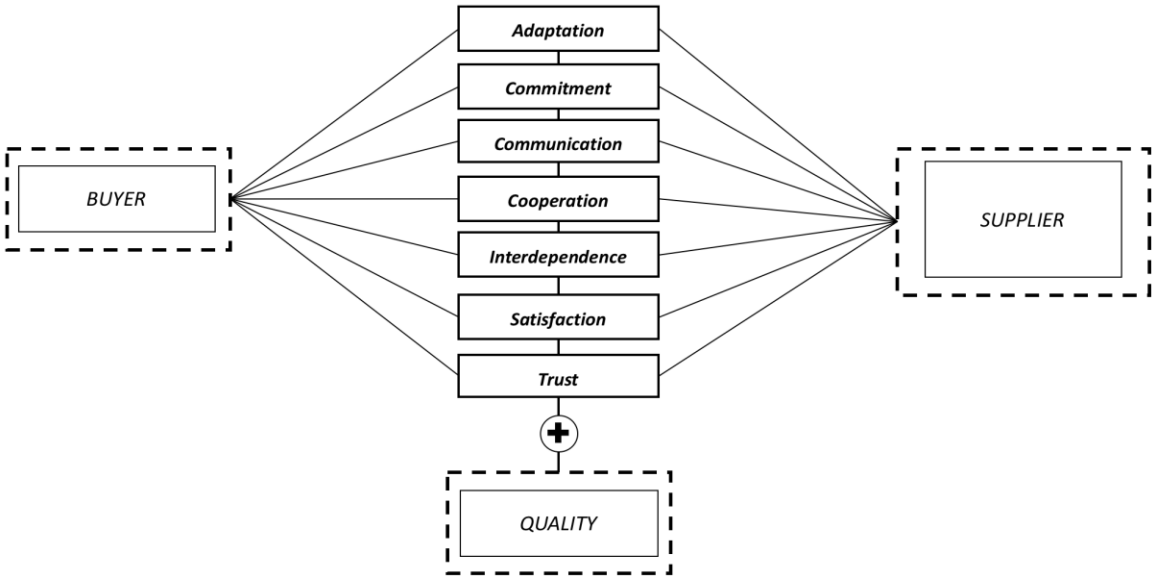

Figure 2.5 Conceptual Framework

3 Methodology

The following chapter discloses the data gathering methods applied in the research process.
This section touches upon the research approach and design, and the introduction of the cooperating buying organisation and the supplier categorisation. Furthermore, the operationalisation of the conceptual framework is discussed. Thereafter, the data collection method is explained, before the research reliability and validity are reflected upon to justify the results of this empirical study.

3.1 Research Approach

The purpose of the research is to illustrate the varying importance of the selected variables in strategic buyer-supplier relationships with respect to distinctive supplier categories, which in turn influences supplier quality, as discussed in the literature review. Thereby, the thesis makes an empirical contribution to the existing body of literature of buyer-supplier relationships and quality management by collecting data and testing it in a new empirical setting.

Saunders, Lewis and Thornhill (2012) define this research approach as deductive, whereas the inductive approach is determined as the development of a new theory by analysing collected data. In comparison to the inductive approach, the deductive research approach emphasises explanations for causal relations among variables with high structure, research independence and an adequate sample size to generalise conclusions (Saunders et al. 2012). Furthermore, it utilises theories from pre-selected literature and attempts to prove these theories by analysing collected data (Bryman and Bell, 2015; Alvesson and Sköldberg, 2009). A deductive approach is therefore highly suitable for the purpose of this thesis, as it aims to identify causal relationships between potential supplies categories and the seven key variables in buyer-supplier relationships derived from the reviewed literature.

Moreover, in management research a vast number of research approach methods are available (Easterby-Smith, Thorpe and Jackson, 2015). The two main methodologies are quantitative and qualitative research (Saunders et al., 2012). According to Easterby-Smith et al. (2015), qualitative

data are bits of information collected in non-numeric form such as interview recordings, transcripts, videos or observations. On the other hand, quantitative research is defined as any technique for data collection, such as questionnaires, that generates numerical data (Saunders et al.,2012). A quantitative approach enables a broad coverage of many participants, increasing the potential number of respondents. It can furthermore allow for a cost-effective and fast distribution (Easterby-Smith et al., 2015).

To be able to identify valid supplier categories with respect to the seven identified key variables, a large sample size is required. The cost-effectiveness, fast distribution and broad coverage ability therefore makes a quantitative method the optimal option for this study. It is also considered to be more advantageous for this study due to a higher number of standardised answers, which improves the objectivity and generalisability of the results (Easterby-Smith et al., 2015). Nevertheless, the quantitative method examines just a current snapshot of the relationship between the suppliers and the buying company. Historical events and development cannot be captured through this method.

3.2 Research Design

The research design outlines a general plan about how to organise research activity and collect data to ultimately achieve the research objectives by answering the research question (Easterby-Smith et al., 2015; Saunders et al., 2012). To conduct a successful research an appropriate research strategy must be chosen. According to Saunders et al. (2012), research design depends on the research question and the desired research outcomes.

To achieve the objective of finding causal relationships between the identified critical variables in supplier categories, it is required to reach a large population. This can be achieved by conducting survey research, which can measure numerous factors simultaneously for a large sample and thus discover any underlying relationships (Easterby-Smith et al., 2015). Survey strategies implicate additional positive aspects such as the creation of models that illustrate these relationships. Furthermore, it is applicable for exploratory and descriptive research (Saunders et al., 2012). The research is designed as an exploratory study, which implies the discovery of novel insights and shed a light on existing phenomena from a new perspective. Collecting data from experienced

practitioners about the topic is one principal way of conducting an exploratory research (Saunders et al., 2012). An exploratory study is therefore an appropriate method to identify variances between variables that support the utilisation of strategic buyer-supplier relationships.

However, survey research also can suffer from possible drawbacks or challenges as described among others by Kelley, Clark, Brown, & Sitzia (2003). A first challenge is to assure a desired response rate, particularly if it is carried out via post. Second, it is likely that collected data might lack details, since respondents are restricted to the questions in the questionnaire. Third, if the focus of the researcher is rather in width (coverage range) than depth, data can have lack of significance Kelley et al. (2003). Although these risks are acknowledged, survey research still provides the most suitable approach for this study.

3.3 Operationalisation of the Framework

The conceptual framework that is based upon the reviewed literature identified seven key variables in buyer-supplier relationships. To measure the importance of these abstract concepts, they need to be transformed into questions that accurately reflect their importance and existence in the examined buyer-supplier relationships. To decrease the chance of any misinterpretations, the buying organisation was consulted to provide feedback regarding the potential use of industry-specific vocabulary. Additionally, the buying organisation is discussed in sub-section 3.5 of the operationalisation to establish an impression of the industry and the size of the buying company. The conceptual framework can ultimately be revised according to the variances found between dimensions in potential supplier categories, regarding these seven key variables. Although the conceptual framework further includes quality as the result of managing the buyer-supplier relationships, the questionnaire does not include any questions about quality as this link is already made in the literature review.

3.3.1 Operationalisation of the Key Variables

The questions that attempt to measure the abstract variables, which of most are inspired by Fynes and Voss (2002), are specified in table 3.1. As mentioned previously in the limitations (section 1.5), these questions are all answered from the suppliers' perspective since this enables the

detailed illustration of the examined buyer-supplier relationships without requiring the buying organisation to assess each individual relationship. Starting with *adaptation*, the two questions focus on the efforts made by suppliers to adhere to the requirements of the buying organisation. These questions assume that the requirements are clearly understood by all the suppliers however, which might not always be the case. Still, this assumption is necessary to make when measuring adaptation in the relationship between the buyer and its suppliers.

A weakness that can be identified for the inquiry of the *communication* variable is that, while this distinction is made in some literature, there is no distinction made between formal and informal communication. Making this distinction could give a more accurate explanation of any variances between any dimensions in potential supplier categories but is knowingly not done due to the prioritisation of other questions.

The *commitment* variable includes one question that enquires about a long-term alliance. As Fynes and Voss (2002) emphasise the long-term aspect of a relationship (see section 2.4), this question is required to comprehensively measure commitment.

For *cooperation*, one question addresses cooperation in relation to quality practices, and the other measures cooperation in relation to forecast and delivery planning. Both these aspects were highlighted by the buying organisation as vital for its operations. This creates a trade-off between questions measuring cooperation in general or questions that are more industry-specific. The latter is used since questions measuring cooperation in general can be perceived as too vague and are subject to many misconceptions.

Interdependence is measured by two questions that examine dependence, but for different parties. One question measures dependence for the buying organisation and the other question for the suppliers. Beneficial with this approach is that the results can indicate any differences in dependence between both parties. A disadvantage is that the results for these questions might show varying results which makes it difficult to find a pattern between dimensions in potential supplier categories.

Satisfaction is exceptionally addressed by solely one question, since the questions measuring variables were derived from literature which provided limited alternatives for satisfaction. Nevertheless, the question attempts to capture the general satisfaction in the relationship between the buying organisation and its suppliers. More specific questions might provide more specific results, but with a limited amount of questions to ensure a high response rate, it also increases the

risk of omitting essential aspects of the relationship that influence satisfaction. Therefore, one general question is preferred.

Trust is again addressed by two questions, one of which emphasises past and present experience. This is to stimulate the respondents to reminisce past occurrences that could have affected their trust in the buying organisation, which might entice them to reflect on the issue before submitting an answer. Lastly, one question is added where respondents must rank the variables according to how essential they perceive each variable to be in their relationship with the buyer. This can provide valuable insights for potential improvements in the examined buyer-supplier relationships. The design process of these questions is discussed in section 3.7.

Table 3.1 Operationalisation of key variables

Variable	Questions
Adaptation	The processes of your firm are adapted to the requirements of the buying company. You have made significant investments to fulfil the requirements of the buying organisation.
Communication	You receive sufficient information about your performance. Both you and Inwido keep each other informed about events or changes that may affect the other party.
Commitment	You see this relationship as a long-term alliance. The relationship that you have with the buying company is something you are very committed to.
Cooperation	Inwido is involved in your forecasting and delivery planning. You cooperate extensively with Inwido with respect to quality practices
Interdependence	It would be difficult for Inwido to find an alternative supplier to you for the materials/services that you currently provide for them.

	It would be difficult for you to replace Inwido as a customer.
Satisfaction	You are satisfied with the working relationship between your firm and Inwido.
Ranking	The success of buyer-supplier relationships depends on several variables, which can be found below. Please rank them according to what variables you perceive to be most essential in your relationship with Inwido. (1 is most important and 7 is least important)

3.4 Supplier Categorisation

As this thesis aims to identify patterns and correlations between distinctive categories that are relevant for the buying organisation and its industry, other categorisation attempts are evaluated. The categorisation of suppliers can help to establish differentiated purchasing and supplier strategies for each supplier category. (Geldermann and van Weele, 2003). Two theoretical approaches are introduced to illustrate established categorisation attempts. Additionally, this study's own supplier categories are introduced.

Kraljic (1983) introduced the first purchasing portfolio categorisation approach. The model implies four stages: classification, market analysis, strategic positioning and action plans (Bedey, 2009) (Geldermann and Van Weele; 2003). The matrix offers a diagnosing tool to analyse the strategic supply to organisations and helps to work in smarter ways with the already existing suppliers (Bedey, 2009). The two dimensions of the matrix are the importance of procurement and the complexity of supply markets (Kraljic, 1983). As reviewed by Montgomery, Ogden and Boehmke, (2017) other researchers, such as Olsen and Ellram (1997), Bensaou (1999), Gelderman and MacDonald (2008) and Lee and Drake (2010), adduced Kraljic's matrix and introduced similar models.

Second, the practitioners Schuh, Strohmer, Easton, Hales and Triplat (2014) illustrate a more practical approach in categorising suppliers. It offers nine ways to divide suppliers and identify solutions for each category to manage supplier relationships successfully. The framework goes beyond partnership suggestions and process management and focuses ultimately on supplier

motivation to meet a partnering organisation's requirements (Schuh et al., 2014). The aim was to introduce a model that could be used on a senior executive level. The nine supplier relationship models can, in a second step, be divided into three clusters. Each cluster and supplier interaction model bear different characteristics and recommendations on how to manage and control them. Suppliers can thus change their position in the matrix (Schuh et al., 2014).

Nevertheless, the two theoretical categorisation models do not fit the purpose of this study and the industrial conditions and requirements of the buying organisation. Therefore, this thesis introduces its own supplier categories and does this by making use of the developed introductory questions. The introductory questions are industry specific and developed in consultation with the cooperating buying organisation. The aim of the categorisation is to identify patterns or distinctions between the dimensions within the potential supplier categories. Table 3.2 illustrates the categories and its dimensions. The introductory questions are composed as category or quantity questions, hence multiple answers were possible for the respondents. This is essential, as manifold answers to one question can provide for the identification of multiple dimensions within one category.

Table 3.2 Supplier Categorisation

Category	Question	Dimensions
Business Area (BA)	Please select the Business Area(s) of the buying organisation you supply to.	Denmark Sweden Norway Finland Poland UK Other
Number of Business Areas (BAs)	Amount of Business Areas	One BA Multiple BAs

Supplier Type	What type of supplier are you?	Direct Material Supplier Indirect Material Supplier Service Supplier
ISO certification	You are ISO certified	Yes No
Length of working relation	Estimate how long have you been working with the buying organisation.	0-1 years 2-5 years 6-10 years 10+ years
Supplier Size	Please indicate the size of your company.	Small - Less than € 10 million annual revenues Medium - Between € 10-100 million annual revenues Large - More than € 100 million annual revenues

Although no specific question in the questionnaire examined the number of Business Areas, this category was added in the results. Furthermore, the scale of annual revenues for the supplier size category was determined together with the buying company, and likewise was a question about the ISO certification added to measure potential variances between certified suppliers and non-certified suppliers. Lastly, categories that address the supplier type and the length of the working relation with the buying organisation could provide valuable insights as well.

To illustrate the representativeness of the respondents towards the entire sample, the characteristics between the respondents and the total sample are compared. To find data for the whole sample, the supplier list that was provided by the cooperating buying organisation is randomised. Thereafter, for efficiency reasons, data is collected for every fifth supplier on this list, who represent the whole sample. Data was mostly collected through annual reports of the suppliers. The data is then multiplied with five and converted into percentages to create an overview of the characteristics for the entire sample, which can be compared with the characteristics of the respondents. This process enables an assessment to be made about the tendencies of the population but is solely possible for the supplier categories that address supplier

type, ISO 9001 certification and supplier size however. Data for the other categories can only be attained through the questionnaire.

3.5 The buying Organisation

To identify the perceived importance of the critical variables and create an understanding of their role in distinctive supplier categories, the survey research is conducted in collaboration with a buying organisation. Examining numerous supplier relationships with the same buyer allows for the comparison of these relationships, which is required to answer the research question. In this thesis, the manufacturing company Inwido AB serves as the focal buying organisation. Inwido is Europe's largest supplier of windows and a leading door supplier in Europe. The main markets are Denmark, Finland, Norway, Sweden, Estonia, Germany, Lithuania, Ireland, Poland, the UK, and Austria. These countries are divided in five Business Areas, where the four first countries represent their own Business Area. The remaining countries are combined into one Business Area, named Emerging Business Europe (EBE) (Inwido AB, 2018).

Inwido is an interesting organisation for the study due to the following characteristics. First, it pursues a business model with customised products and has no standardised production for its goods, which makes it highly dependent on the supply of services, materials and components (Williamson, 1981). Second, Inwido is reliant on numerous suppliers since their products consist of several components. As a result, high pressure is put on Inwido's suppliers to meet the agreed requirements regarding quality, time and volume (Inwido AB, 2018). Furthermore, Inwido has 20 subsidiaries such as Elitfönster, SnickarPer, Hajom, Hemmafönster, Tiivi, Diplomat, and Sokolka with operations in several countries in Europe. To remain competitive in these regions and react to the varying building standards and local preferences in different markets, Inwido mostly operates in a decentralised organisation, with some exceptions such as the support center in Vilnius (Inwido AB, 2018). Lastly, Inwido can be perceived as a typical manufacturing company with numerous suppliers which enables the inquiry of buyer-supplier relationship characteristics.

3.6 Data Collection Method

The primary data is collected through a quantitative method. To overcome geographical limitations and reach a large sample size, the type of survey that is utilised is a self-completion web-based questionnaire (Saunders et al., 2012). The questions were developed and submitted in SurveyMonkey, which is an online platform that automatically stores the answers of the respondents. Participants were sent the link via email to access the online platform and could answer the questionnaire online. Included in this email was an introductory text (see Appendix A) that explained the purpose of the research, the context of the survey and the participation deadline. This decreased the likelihood of participants dismissing the survey before even opening it (Thayer-Hart, Dykema, Elver, Schaeffer and Stevenson, 2010). Although this approach is cost-effective, it should be noted that the response rate might have suffered under the lack of personal contact that characterises this method (Easterby-Smith et al., 2015).

The buying organisation provided a supplier list with the contact information of 194 suppliers, which are selected from a supplier base of approximately 3000 suppliers. The selection of the participants was based upon the relative importance of the supplier to the buyer's operations and the frequency of deliveries, regardless of their size. Thus, the selected suppliers already have an established relationship with the buying organisation, which could have consequences for the findings as this sampling approach provides less opportunity for finding differences between categories. The decision of which suppliers met these criteria was made by the Group Purchase Coordinator and the Category Managers who are each responsible for their own Business Area. Thus, this sampling is most closely resembling a stratified sampling technique (Easterby-Smith et al., 2015),

Furthermore, during the distribution of the questionnaire, some time constraints had to be taken into consideration. The submission deadline of this thesis restricted the timeframe of the responding period. Therefore, a compromise had to be made between the response rate and the length of the response time for the questionnaire. To stimulate a higher response rate, a mail was sent from the buying organisation to the targeted participants prior to the distribution of the questionnaire, increasing its perceived legitimacy (see Appendix G). Moreover, total anonymity

and confidentiality was ensured. During a response period of ten days, one reminder email was sent out on the fifth day to stimulate non-repliers to respond to the questionnaire (see Appendix B).

3.7 Question design

Questionnaires can be used to collect three kinds of variables (Dillman, 2007). A distinction is made between opinion, behavioural and attribute variables. Opinion variables reflect the thoughts and beliefs of the respondents. The other two types are based upon the current, historical and planned actions of an organisation, and the features of the respondents and their firms respectively. The questionnaire developed in this thesis inducts questions with the aim of collecting mainly opinion and behavioural variables, apart from some introductory questions which aim for the collection of attribute variables.

The structure of the questionnaire, which can be found in Appendix A, is derived from the literature review and is grouped accordingly. This enables the participants to answer the questions more considerately, as they can think through various parts of the main research topic (Easterby-Smith et al., 2015). Furthermore, the questions related to buyer-supplier relationships are structured around the variables of trust, adaptation, commitment, satisfaction, interdependence, cooperation and communication. As these seven variables are presented as the key features of the buyer-supplier relationship, and therefore are tested to explore the differences in their perceived importance in the different supplier categories, it is required that they are given a main role in the questionnaire.

The questionnaire almost exclusively contains closed questions. One open question is posed to learn the job position of the respondent, with the purpose of increasing the validity. A few introductory questions are posed as category or quantity questions. However, most of the questions asked in the questionnaire are termed as rating questions, which are often used to assemble opinion variables. The purpose of most of these rating questions in this questionnaire is to measure the importance of each of the seven key variables in the relationship between the buying organisation and its suppliers. The other three rating questions asked at the end of the questionnaire measure the willingness and ambition of suppliers to engage in a strategic buyer-supplier relationship with the buying organisation. These questions are grouped under the

overarching term of strategic potential. To capture and reflect the answers given on these rating questions, the Likert scale is selected as a measurement scale as it enables respondents to indicate how strongly they agree or disagree with a certain statement (Saunders et al., 2012). Furthermore, to increase measurement accuracy (Nemoto and Beglar, 2014), the Likert scale used in this questionnaire contains seven points instead of five.

Additionally, one ranking question aims to examine how much value suppliers' attach to each of the key variables by ranking them in an order from 1 to 7. Initially, in the questionnaire, the variable that was perceived as most important was ranked with the number 1. A rank of 7 was thus the variable that the respondent attached the least value to in their relationship with the buying organisation. However, to allow for the comparison of results between the rating questions and the ranking question, the ranks are turned around after receiving the responses. Thus, a variable that is ranked as 7 is the variable that was perceived as most important by the respondent.

Nemoto and Beglar (2014) argue that a questionnaire should exclusively include items that can be answered by the respondents. Nevertheless, this questionnaire does not oblige the respondent to answer each question to avoid pressuring the participants for answers they may perceive as sensitive, as it otherwise might decrease the response rate. A text box is provided where respondents can state the reason of withholding an answer. The terminology indicating the meaning of each response point is adopted from Saunders et al. (2012).

3.8 Pilot Testing of Questionnaire

The process of developing questions and constructing a structured questionnaire is an iterative process (Thayer-Hart et al., 2010). This iterative process begins with an initial draft of questions and continues with carrying out sufficient pilot work to become aware of any unclarities. The idea of pilot testing is to achieve a refined questionnaire to facilitate a smooth and effortless answering process (Saunders et al. 2012). Van Teijlingen and Hundley (2001) discuss pilots as pre-tests or trials of the selected research method and mention different reasons for conducting a pilot study such as the assessment of feasibility and the determination of additional support.

The pilot test for the questionnaire used in this thesis was undertaken by peer students. The peers received the link to the initial version of the web-based survey and were able to provide feedback in a group seminary. The aim of this pilot was to receive input and feedback about the wording of the questions as well as the clarity and convenience of answering the questionnaire in general.
In effect, the pilot test provided valuable feedback about sensitive questions, which had to be rephrased to decrease the risk of not being answered. Similar to that, the probes indicated that the introductory text of the questionnaire was insufficiently focusing on the benefits for the suppliers for answering the questionnaire. Moreover, minor changes on the layout and design were undertaken in accordance to the feedback.

Saunders et al. (2012) propose to send questions initially to a group of experts, which are asked to comment the questions. Therefore, in a second step, the questionnaire was sent to Inwido and further distributed to the category managers of each region. The intention of this second step was to achieve feedback on legitimate and industry specific wording and phrasing. By doing this, potential practical problems could be identified and further improved the questionnaire (Van Teijlingen and Hundley 2001). The buying organisation's feedback initiated the final changes of the questionnaire, which contained adjustments of wording such as "production planning" to "delivery planning". Subsequently, the questionnaire was finalised and distributed to the suppliers via email. Through these pilot tests an iterative development process and increased validity could be achieved.

3.9 Data Analysis

Easterby-Smith et al. (2015) state that, after the collection of large amounts of quantitative data, the difficulty is to identify and understand the patterns that are present in these data sets. This indicates a requirement to summarise the data, before any inferences can be made. This thesis utilises a statistical software tool, named SPSS Statistics, to summarise, visualise, describe and eventually interpret the results of the questionnaire. SPSS is a statistical software programme that among other things uses algorithms and text analyses to understand and analyse integrated data (IBM, 2018). Data were exported from SurveyMonkey to an excel file and coded, before

transferred into SPSS Version 24. The questions, except for the ranking question, are coded as follows:

Table 3.3 Coding of Questions

Coding	Questions
ADA1	The processes of your firm are adapted to the requirements of Inwido.
ADA2	You have made significant investments to fulfil the requirements of Inwido.
COM1	You receive sufficient information about your performance.
COM2	Both you and Inwido keep each other informed about events or changes that may affect the other party.
COMI1	You see this relationship as a long-term alliance.
COMI2	The relationship that you have with Inwido is something you are very committed to.
COO1	Inwido is involved in your forecasting and delivery planning.
COO2	You cooperate extensively with Inwido with respect to quality practices
INT1	It would be difficult for Inwido to find an alternative supplier to you for the materials/services that you currently provide for them.
INT2	It would be difficult for you to replace Inwido as a customer.
SAT1	You are satisfied with the working relationship between your firm and Inwido.
TRU1	Based on your past and present experience, how would you assess the level of trust your firm has in its working relationship with Inwido?
TRU2	You feel that Inwido is a reliable business partner.

Descriptive statistics, such as the mean, mode and frequencies are utilised to demonstrate the results. The means are compared to identify any existing trends and patterns between dimensions in the examined supplier categories. Additionally, the One-Way ANOVA test is performed to illustrate potential significant variances between the dimensions and to establish the interrelation between independent and dependent variables. The Brown-Forsythe test is then used to verify the robustness of the equality of means. The confidence intervals are positioned at 95 percent, which implies a significance if the p-value is $\leq 0{,}05$.

3.10 Literature Review Development

In a traditional literature review, only the literature that is deemed most relevant or stimulating by the researchers is included. A systematic approach on the other hand, assesses all relevant literature on a certain issue and requires the construction of several criteria to make the filtering decisions (Easterby-Smith et al., 2015). Due to an abundance of literature on the topics touched upon in this thesis, a traditional approach is pursued.

Noshad and Awasthi (2015), previously mentioned in section 1.2, is a composition of numerous papers and represented the starting point for the development of the literature review. Citations and keywords considered relevant for the research were noted down and searched for on online academic search engines, such as Google Scholar and Lund University Online Library. The latter provided access to numerous online libraries of academic publications such as JSTOR journals, EBSCOhost database, SAGE journals and emerald insights. A snowballing technique was applied to methodologically explore the landscape of literature that was valuable for this thesis (Easterby-Smith et al., 2015).

To facilitate an overview of the found and reviewed literature, a summary record was created on a digital spreadsheet in Microsoft Excel. The purpose of this summary record was to make it easier to assess and compare the literature (Easterby-Smith et al., 2015). The spreadsheet was designed to display the authors, keywords, title and main contribution of the piece of literature in question. Moreover, the literature was categorised according to the field of research it belonged to, which stimulated the identification of common themes. Thus, although time intensive, the summary record provided a foundation for efficiently writing the literature review and proved useful as the body of reviewed literature extended during the review process.

Throughout the writing process, a systematic comparison between the questionnaire and the literature review allowed for the continuous improvement of both parts. Since the structure of the questionnaire is derived from the literature review, a comparison of both chapters helped identify the flaws in each part. This process improved the quality of both parts and thus benefited the quality of the responses received on the questionnaire.

3.11 Reliability and Validity

One key justification of undertaking research is an outcome or result that is more rigorous and credible than ordinary observations, which can be termed as credibility (Easterby-Smith et al., 2015). Credibility means to diminish all possibilities of answering a hypothesis or research question wrong (Saunders et al., 2012). To achieve credibility, two terms are emphasised: validity and reliability. As this study gathers data through a questionnaire, the validity and reliability mainly depend on the questions' design and the structure of the questionnaire (Saunders et al., 2012). As mentioned previously, the pilot testing of the questionnaire by peer students and feedback sessions with the buying organisation were key factors in the iterative process of developing and revising these aspects.

3.11.1 Reliability

The reliability of a questionnaire is concerned with the consistency and robustness of the questionnaire. In other words, the degree of reliability depends on whether the generated results are consistent under dissimilar circumstances and with various samples (Saunders et al., 2012).

Mitchell (1996) proposes several manners to determine the reliability of a questionnaire, two of which are applied in this study. The first manner evaluates the internal consistency by comparing the answers to each question with the answers of other questions in the same questionnaire. The method that was utilised in this thesis for calculating this correlation is the Cronbach's alpha coefficient, which can be calculated in SPSS. It measures the correlation of two randomised samples and the internal consistency of a test. The range of the measures is between 0 and 1. Internal consistency explains the degree to which all tested objects measure the same construct (Bland and Altman, 1997). All variables that are measured by two questions except for interdependence and cooperation project a high Cronbach's alpha coefficient, thus demonstrating a high level of reliability. Interdependence and cooperation do presumably not depict a high Cronbach's alpha as the two questions addressing each variable enquire about a different aspect of the variable or from a different perspective, as explained in the operationalisation framework (section 3.5).

Table 3.4 Cronbach's Alphas of variables

Variable	Cronbach's Alpha
Adaption	,712
Commitment	,785
Communication	,706
Cooperation	,475
Interdependence	,373
Satisfaction	N/A
Trust	,867

A second manner for determining reliability is the utilisation of several test questions. The test questions are marked with a red (T) in the attached questionnaire in Appendix A. Two questions in the questionnaire were duplicated and rephrased. This allows for the comparison between the alternative versions of the same question to assess whether the questions have been understood correctly. The inherent risk however, is that respondents could recognise the test questions and simply refer to the answer given to the original question (Saunders et al., 2012). For the test questions in this questionnaire, it occurred only once. One respondent recognised one of the test questions, referred to the original question in the comment text box and submitted the same answer as for the original question. No other respondents indicated to have recognised either one of the test questions.

3.11.2 Validity

Internal validity is concerned with the ability of the questionnaire to accurately measure the elements that are intended to be measured (Easterby-Smith et al., 2015). Saunders et al. (2012) mentions two specific types of validity that are relevant for this study. Content validity addresses the relevance of the questions to the research purpose. It assesses to what extent a question is necessary to answer to achieve the research objectives. Construct validity considers how well the questions of the questionnaire can be generalised to the concepts that are intended to be

measures. These two types of validity are addressed in this study as follows: initially, many of the questions regarding the seven key variables of buyer-supplier relationships were inspired by Fynes and Voss (2002), as explained in section 3.3.1. Through basing the questions on literature, a clear link between the questions in the questionnaire and the concepts that are intended to be measured is provided. Furthermore, pilot testing and feedback seminars with the buying organisation stimulated further improvement of the content and construct validity of the questions.

Robson (2002) proposes six potential threats to validity, one of which is highly applicable for this study. The testing threat discusses the risk of responses being affected if respondents believe that the results of the questionnaire can have negative consequences for them personally. In this case, participants could have been cautious with answering negatively if they were worried that this could negatively impact their relationship with the buyer. Although the questionnaire used in this thesis included an introductory text ensuring total anonymity, it is still worth noting that this threat might have influenced the results. Although, by combining the mentioned methods, the reliability and validity of this research can be considered satisfactory.

Lastly, it is required to address the external validity of this research. Saunders et al. (2012) relate external validity to the applicability of the findings to other circumstances or organisations. In other words, it refers to the generalisability of the results. This can be a significant issue if a case study is conducted with a one or few organisations (Saunders et al., 2012). Since in this study quantitative methods are utilised to reach a large sample of suppliers, the external validity is affected less by this. What can be a concern, is the respondents of the questionnaire all being suppliers to on buying company, thus all having a connection to one specific company and industry. This limits the applicability of the results to industries other than wood and wood-aluminium industry. Furthermore, the categories of suppliers that are established throughout this thesis are tailored to requirements of the buying company. This unquestionably restricts the generalisability of the findings that are related to the differences within these categories.

4 Empirical Findings

Out of the 194 suppliers that received the questionnaire and were asked to participate in the research, 93 suppliers responded. This amounts to a response rate of 48%. The question that asked for the job position of the respondents revealed that all respondents had a legitimate position within their organisation. The indicated job positions ranged from Product and Sales Managers, to Key Account Managers and CEOs. There was no single answer raising any concern regarding the legitimacy of the respondent and thus a threat to the validity of this study.

The distribution of the 93 suppliers within the inquired categories are displayed in table 4.1, in column *"N in %"*. The results of the questionnaire illustrate a reasonable spread between the dimensions in each category. With respect to the size of the suppliers, the respondents are divided relatively evenly as there is no difference larger than 9% between any of the dimensions. A more uneven distribution is apparent in the ISO 9001 category, where the suppliers that are ISO 9001 certified are undoubtedly prevalent. In the category that distinguishes suppliers according to the length of their working relationship with the buyer, supplier representation increases as the working relationship period extends. Nearly half of the respondents indicated that they have been working with the buying organisation for longer than 10 years. Worth noting here is that the dimension of suppliers that have had a working relationship with the buyer for less than one year is not further considered in the analysis. The low representation of this dimension simply does not allow for any valid conclusions to be drawn.

Similarly, in the Business Area category, one dimension is distinctively better represented than other dimensions. The results display that around 40% of the suppliers perform a service or supply materials for the buying organisation in Sweden, 20% more than in any other Business Area. This same trend is again apparent in the next category, where participants indicated if they provide services, direct and/or indirect material for the buying organisation. The responses further demonstrate that the clear majority supplies direct materials to the buying organisation, where Wood & Components and Hinges & Fittings are the materials that are supplied the most. Although some categories are characterised by unevenly distributed responses, each dimension in every category is represented sufficiently to allow for any conclusions to be drawn. One exception to this notion is the category that addresses which types of materials or services

suppliers provide. This category contains an abundance of options, and the responses are highly widespread. The measured differences between these dimensions, regarding the role of the seven key variables in the buyer-supplier relationship, are therefore minimal. As such, this category is not further considered in this study as a potential supplier category that can be utilised for managing buyer-supplier relationships.

The raw empirical data and statistical analysis can be found in Appendix C (means), D (Cronbach's Alpha), E (ANOVA) and F (Brown-Forsythe test).

Table 4.1 Distribution of suppliers

Category	Dimensions	N in %	Total N in %
Business Area (BA)	*Denmark*	*19,8%*	
	Sweden	*41,4%*	
	Norway	*11,5%*	
	Finland	*12,7%*	
	Other (incl. Poland and UK)	*14,6%*	
Number of Business Areas (BAs)	*One BA*	*67,7%*	
	Multiple BAs	*32,3%*	
Supplier Type	*Direct Material Supplier*	*65,4%*	*63%*
	Indirect Material Supplier	*18,3%*	*18,5%*
	Service Supplier	*16,3%*	*18,5%*
ISO certification	*Yes*	*59,3%*	*55,3%*
	No	*40,7%*	*44,7%*
Length of working relation	*0-1 years*	*4,3%*	
	2-5 years	*16,1%*	
	6-10 years	*30,1%*	
	10+ years	*49,5%*	
Supplier Size	*Small - Less than € 10 million annual revenues*	*30,1%*	*34,1%*
	Medium - Between € 10-100 million annual revenues	*39,8%*	*37,1%*
	Large - More than € 100 million annual	*30,1%*	*28,8%*

	revenues	
Material	*Finished Goods*	*6,0%*
	Glass	*6,0%*
	Hinges & Fittings	*12,0%*
	Installation	*0,9%*
	IT	*2,6%*
	Machinery	*4,3%*
	Mountings	*4,3%*
	Other direct material	*7,7%*
	Packaging Material	*2,6%*
	Plastics	*8,5%*
	Sealing Strips	*4,3%*
	Semi-finished Goods	*0,9%*
	Surface treatment: Aluminium	*2,6%*
	Surface treatment: Wood	*5,1%*
	Transports	*3,4%*
	Wood & Components	*17,1%*
	Other Indirect Material	*10,3%*

To understand how representative the 93 respondents are for the whole sample of 194 suppliers, an evaluation of the characteristics of the whole sample is performed and are shown in column *"Total N in %"* in table 4.1. As mentioned in section 3.4, this is possible for the supplier categories that address supplier type, ISO 9001 certification and supplier size. The characteristics for the other categories can solely be obtained through the questionnaire, making it difficult to estimate the tendencies in the population for these specific categories.

However, for the supplier categories where this is possible, it is apparent that the respondents represent the total sample relatively well. The largest difference for a dimension that can be found between the 93 respondents and the total sample of 194 suppliers is 4%. Thus, there are no distinct under- or over representations of the whole sample present within these supplier categories. Therefore, it can be concluded that, for these three supplier categories, no significant

tendencies in the population can be found by comparing the respondents' characteristics with those of the total sample.

4.1 Key variables in the buyer-supplier relationship

Based upon the literature review, the conceptual framework for this study was established and introduced the seven key variables as the focus of the quantitative research.
Rating questions are used to establish the importance of each of the seven key variables in the relationship between the buyer and the suppliers analysed in this thesis. By comparing the mean between the different variables, it becomes evident that commitment and trust are the two most important variables in the relationship between the buyer and suppliers of this sample (see table 4.2). Since the Likert scale that was utilised in the questionnaire ranged from 1 to 7, the means of the variables all exist between this range. Both questions measuring commitment reveal a mean higher than 6,00. The two questions that measured the trust variable hover around a mean of 6,00 as well. Interdependence seems to play a less significant role in the examined buyer-supplier relationships, with means close to 4,50. In general, all the variables have a mean that is higher than 4, which could demonstrate a relatively high significance of all variables in the relationship between the buyer and suppliers of this sample. This also supports the notion of Fynes and Voss (2002) who state that these key variables are interrelated. Noteworthy however, is that the stratified sampling technique, previously described in section 3.6, could also be a reason for seeing differences solely on a relatively granular scale. The results are displayed in table 4.1.

Another important aspect to address in table 4.2 is the difference in the mean between the questions that measure the same variable. Inspired by Fynes and Voss (2002), most variables are measured by more than one question to increase the comprehensiveness of the research. The Cronbach's Alpha coefficient previously mentioned in section 3.1, demonstrated a high correlation between all questions that measured the same variable, except for cooperation and interdependence, where each question focuses on a different aspect of the variable which explains a lower coefficient. This serves as a verification of the notion that the questions measure what they intend to measure.

Table 4.2 Descriptive Statistics: Rating Question

Variable	Adaptation		Commitment		Communication		Cooperation		Interdependence		Satisfaction	Trust	
Coding	ADA1	ADA2	COMI1	COMI2	COM1	COM2	COO1	COO2	INT1	INT2	SAT1	TRU1	TRU2
Mean	5.8804	5.7391	6.1720	6.5054	4.5914	5.3478	4.3441	5.0860	4.5275	4.4066	5.9130	5.8495	6.0860
N	92	92	93	93	93	92	93	93	91	91	92	93	93
Minimum	2.00	2.00	2.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	3.00	3.00
Maximum	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Variance	1.008	.920	1.296	.687	2.179	1.724	2.989	2.253	1.852	1.977	1.531	1.194	.971
Std. Deviation	1.00376	.95928	1.13849	.82914	1.47616	1.31295	1.72888	1.50113	1.36089	1.40616	1.23726	1.09292	.98528
Median	6.0000	6.0000	7.0000	7.0000	5.0000	6.0000	4.0000	5.0000	4.0000	4.0000	6.0000	6.0000	6.0000
Cronbach's Alpha	0,712		0,785		0,706		0,475		0,373		N/A	0,867	

4.2 Strategic Potential

To test the potential for strategic buyer-supplier relationships, STR2 and STR3 measured the willingness of the respondents to engage further into a strategic relationship with the buyer. STR1 addresses the status quo, and measures whether respondents of the questionnaire see themselves as strategic partners of the buying organisation or not. In general, the suppliers that participated in this research indicated to have a significant interest in an increased strategic relationship with the buyer. Furthermore, the results illustrate a margin for improvement as not all suppliers that are eager to be in a strategic relationship with the buyer (STR 2 and STR 3) perceive themselves as strategic partners of the firm (STR 1).

Table 4.3 Descriptive Statistics: Strategic Potential

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
STR1	93	1.00	7.00	5.7419	1.29298	1.672
STR2	93	4.00	7.00	6.0108	.96114	.924
STR3	93	4.00	7.00	6.5376	.74541	.556

4.3 Improvement potential

Table 4.4 displays the descriptive statistics which are based upon the results of the ranking question. The purpose of this question is to demonstrate the perceived importance of the key variables *trust, dependence, adaptation, communication, commitment, satisfaction* and *cooperation* to suppliers in their relationship with the buying organisation. To make the results of the ranking questions comparable with the remaining questions of the questionnaire the ranks were turned around, for instance if a supplier ranked a variable with 1, the results present it as a 7. Thus, a 7 means that the measured variable is perceived as highly important.

Table 4.4 Descriptive Statistics: Improvement Potential

	Adaptation	Commitment	Communication	Cooperation	Interdependence	Satisfaction	Trust
Mean	3,1264	4,2619	4,6629	4,6977	2,7386	3,8372	4,7558
Median	2,0000	4,0000	5,0000	5,0000	2,0000	4,0000	5,0000
Mode	2,00	6,00	5,00	7,00	1,00	3,00	7,00
Std. Deviation	1,84141	1,75017	1,71188	1,82189	2,21538	1,75473	1,95199
Variance	3,391	3,063	2,931	3,319	4,908	3,079	3,810
Range	6,00	6,00	6,00	6,00	6,00	6,00	6,00

It is found that the variables trust and cooperation have a mode of seven, which is a measure of location and denotes the most common value among the collected data (Easterby-Smith et al., 2015). On the other side, interdependence and adaptation display a mode of one and two and are therefore perceived as least importance to the suppliers in their relationship with the buying company. The mean is defined as the average value resulting from the sum of all scores divided by the amount of data points (Easterby-Smith et al., 2015). Trust, cooperation and communication all have a mean close to 4,7 whereas again adaptation and interdependence have a very low mean. The remaining variables range in between. As a result, it can be noted that trust and cooperation noticeably important to the suppliers in this study, followed by commitment, cooperation and satisfaction. Interdependence and adaptation seem to be perceived as less essential.

By discussing the responses for the whole sample, an overview is provided of the general results. However, to answer the research question, it is required to examine the differences in these results between dimensions in the identified potential supplier categories. The structure for discussing these differences between dimensions is derived from the conceptual framework in section 2.7. Each variable is addressed in a separate section before also the responses concerning strategic potential are touched upon.

4.4 Adaptation

The first key variable in the relationship between the buyer and its suppliers that is analysed is adaptation (see table 4.5). The results show that adaptation is an important factor in the examined buyer-supplier relationships, with a mean of 5,88 and 5,74 for the two rating questions ADA1 and ADA2 that address this variable. Minor differences were found between dimensions in some of the categories. In the Business Area category, for suppliers operating in the Business Areas Sweden (mean: 5,78) and Norway (mean: 5,68), question ADA1 displayed slightly lower results than for the remaining suppliers. In the category that distinguishes between types of suppliers, the results depict that service suppliers perceive adaptation as more important in their relationship with the buyer than the material suppliers, which is reflected in both questions about adaptation. No significant variance between the dimensions was found by the ANOVA test however, which is also the case for the categories that address the number of BAs, the length of the working relationship and the certification of ISO 9001. The size of suppliers was also found to affect the role of adaptation in the relationship between suppliers and the buying company. Suppliers increasingly attach more value to adaptation as they become larger. Large suppliers, which are suppliers that exceed annual revenues of € 100 million, show a mean of 6,07 and 5,89 for ADA1 and ADA2 respectively, which is higher than the general mean of the questions. Nonetheless, the one-way ANOVA analysis again reveals that there are no significant differences between the means in suppliers' size with regards to adaptation. The ANOVA test shows p-values of 0,99 (ADA1) and 0,594 (ADA2). Likewise, the Brown-Forsythe robustness test shows no significance in the robustness of the means.

The ranking question depicts the following results. Adaptation for the participating suppliers in general is perceived as less important. The average ranking was 3,13, which displays the second lowest rank. With respect to the Business Areas, slight differences were found in the mean. Suppliers that are active in the Business Areas Denmark, Norway, Poland, UK and Estonia did never rank adaptation as the most important variable in their relationship with the buying organisation. The mean of the suppliers that are active in these Business Areas is therefore lower

than the total average. Whereas suppliers in the dimensions Sweden (3,08) and Finland (3,21) show higher results than the total mean. A difference in the perceived importance of adaptation was also found between the dimensions that divide suppliers according to the number of BAs they supply to. If selected suppliers deliver goods and provide services for one BA (mean: 3,44) adaptation has a higher importance than when they deliver in multiple BAs (mean: 2,46). This is also reflected in the frequencies of the answers. None of the suppliers that operate in several Business Areas ranked adaptation at 7, thus it was never perceived as the most important variable. Likewise, a distinct result of the means was found between the dimensions in the type of supplier category. It is discernible that service suppliers do not regard adaptation as equally important as both material supplier dimensions. Direct and indirect material suppliers had a mean close to the general mean of the results of the adaptation variable, whereas service supplier ranked it lower on average with a mean of 2,50.

Between suppliers with and without ISO certification a difference in ranking could be found as well. The 32 suppliers that are not ISO certified ranked adaptation on average 0,45 higher than certified suppliers. Furthermore, a pattern was also found within the size categorisation approach. The results display a decreasing perceived importance of adaptation while the size increases. Large suppliers attach significantly less value to adaptation (mean: 2,64), than medium (3,22) or small suppliers (3,46).

At the same time, no pattern is found in the category that distinguishes suppliers according to the length of their working relationship with the buying organisation. However, suppliers with a contractual relation between 6-10 years ranked adaptation notably higher (mean: 3,60) than the remaining dimensions, as well as the general mean of 3,13.

Table 4.5 Descriptive Statistics: Adaptation

Dimension per Category		ADA1	ADA2	Ranking Adaptation
Business Areas				
Denmark		6,226	5,867	2,724
Estonia		6,200	6,200	1,800
Finland		6,200	5,947	3,211
Norway		5,684	5,778	2,688
Poland		6,250	6,083	2,769
Sweden		5,781	5,714	3,083
UK		6,250	6,750	2,000
ISO certification	**ANOVA:**	**.245**	**. 734**	
No		5,730	5,703	3,412
Yes		5,981	5,774	2,961
Length of working relation	**ANOVA:**	**.919**	**.746**	
0-1 years		6,000	6,250	2,500
2-5 years		5,714	5,667	3,333
6-10 years		5,970	5,781	3,594
10+ years		5,854	5,683	2,744
Number of BA	**ANOVA**	**.584**	**.871:**	
One BA		5,823	5,730	3,441
Several BA		6,000	5,759	2,464
Supplier Size	**ANOVA:**	**0.99**	**.594**	
Large - More than € 100 million annual revenue		6,071	5,889	2,640
Medium - Between € 10-100 million annual revenues		6,000	5,649	3,222
Small - Less than € 10 million annual revenues		5,536	5,714	3,462
Type of Supplier	**ANOVA:**	**.161**	**.598**	
Direct Material Supplier		5,851	5,750	3,154
Indirect Material Supplier		5,714	5,615	3,500
Service Supplier		6,273	5,818	2,500

4.5 Commitment

The category concerning the type of supplier offers no meaningful distinctions in commitment between dimensions in the results of neither rating or ranking questions. A notable difference can

be found when comparing the size of suppliers however. The relationship between the buyer and suppliers that indicated to earn less than € 10 million annual revenues and thus were considered small in this study, was characterised by lower commitment than the relationship between the buyer and medium or large suppliers. Responses for both rating questions that measured commitment displayed higher means for medium and large suppliers than for small suppliers.

This difference between small, medium and large suppliers can also be found through the examination of the ranking question results. The small suppliers that participated in this study indicate to be less interested in commitment in their relationship with the buyer, than medium or large suppliers. Commitment receives a mean of 3,96 from small suppliers, while the large supplier dimension illustrates a mean of 4,17. Out of these three dimensions, medium suppliers consider commitment to be the most important in the relationship with the buyer with a mean of 4,53. Furthermore, the One-Way ANOVA illustrates a significance of 0,039 between size and COMI2. The Brown-Forsythe calculation verifies this and shows a significance of 0,050, indicating the robustness of the results (see Appendix F). No significance is reported between size and COMI1 however. This might be attributed to the differences between the questions, which is discussed in section 3.1. A significant variance is also found ISO 9001 certification category, where again COMI2 presents a significant variance (0,025) between suppliers in the sample that are ISO 9001 certified and suppliers that are not. This notion is confirmed by the Brown-Forsythe calculation, which illustrates a significance of 0,043.

In the Business Area category, suppliers that are active in Denmark perceive commitment as a more important variable than suppliers that are active in any other country, with a difference in mean of at least 0,40. This thrive for commitment of the suppliers supplying to the buyer in Denmark is not noticeable in the responses to the rating questions however. Although they perceive commitment to be a more essential variable, commitment currently does not play a larger role in their relationship with the buying organisation in comparison to suppliers that are active in other countries. Furthermore, the period of the working relation also seems to influence the perceived importance of commitment. The results illustrate an increasing trend in the mean as the length of the working relation period enhances. The mean increases from 3,82 to 4,00 to 4,50 for suppliers that have had a working relationship with the buyer for 2-5, 6-10 and more than 10

years respectively. Again, this result is not reflected in the responses for the rating questions, where there is no distinct difference between dimensions.

Table 4.6 Descriptive Statistics: Commitment

Dimension per Category		COMI1	COMI2	Ranking Commitment
Business Areas				
Denmark		6,452	6,645	4,778
Estonia		6,600	6,800	3,000
Finland		6,450	6,500	4,211
Norway		6,000	6,421	4,000
Poland		6,077	6,692	3,923
Sweden		6,156	6,578	4,167
UK		7,000	7,000	4,333
ISO certification	**ANOVA:**	**.264**	**0.025**	
No		6,027	6,270	4,323
Yes		6,296	6,667	4,333
Length of working relation	**ANOVA:**	**.981**	**.939**	
0-1 years		6,250	6,750	5,500
2-5 years		6,267	6,533	3,818
6-10 years		6,182	6,485	3,968
10+ years		6,122	6,488	4,500
Number of BA	**ANOVA:**	**.695**	**.530**	
One BA		6,127	6,460	4,368
Several BA		6,267	6,600	4,037
Supplier Size	**ANOVA:**	**.548**	**.039**	
Large - More than € 100 million annual revenue		6,250	6,714	4,167
Medium - Between € 10-100 million annual revenues		6,270	6,595	4,528
Small - Less than € 10 million annual revenues		5,964	6,179	3,958
Type of Supplier	**ANOVA:**	**.508**	**.902**	
Direct Material Supplier		6,191	6,544	4,397
Indirect Material Supplier		6,000	6,357	3,455
Service Supplier		6,273	6,455	4,300

4.6 Communication

The questions COM1 and COM2 examined the communication between supplier and buyers. Most of the dimensions within categories displayed results that closely resemble the total means of 4,59 (COM1) and 5,35 (COM2). More specifically, the categories that address the number of BAs served and the length of the working relationship do not display distinctive results between the dimensions and the total means. Furthermore, the ANOVA analysis did not show any significant variances regarding communication.

Differences were found between the Poland, UK and Estonia (the three EBE countries) and the Nordic countries. For suppliers that are active in one or several EBE countries, the relationship with the buyer was characterised more by the communication variable than for suppliers that supply to the Nordic countries. Furthermore, the category that addresses the suppliers' size depicts a pattern. It is apparent that the size of the suppliers has a positive influence on the importance of communication in the relationship with the buyer. For both COM1 and COM2, the mean increases as suppliers become larger. The analysis of variance entails p-values that are not significant however.

Communication is most frequently ranked with 5, and displayed a mean of 4,66. Hence, communication is perceived as the third most important variable among the selected suppliers, regardless any categorisation. Some minor differences between dimensions could be found in the categories that address the type of supplier and size. Service suppliers (mean: 4,00) ranked communication lower than the material suppliers (means of 4,70 and 5,01). Moreover, large suppliers showed a mean of 5,08 which is considerably higher than small and medium suppliers. Nonetheless, the ANOVA for the ranking question reveals no significant difference between the dimensions in any of the categories.

Table 4.7 Descriptive Statistics: Communication

Dimension per Category		COM1	COM2	Ranking Communication
Business Areas				
Denmark		4,516	5,367	4,517
Estonia		5,000	6,200	5,000
Finland		4,750	5,263	4,550
Norway		4,368	5,000	4,118
Poland		4,538	5,333	5,000
Sweden		4,563	5,365	4,677
UK		5,250	6,250	5,000
ISO certification	**ANOVA:**	**.132**	**.278**	
No		4,297	5,162	4,294
Yes		4,778	5,472	4,849
Length of working relation	**ANOVA:**	**.930**	**.713**	
0-1 years		4,500	5,750	6,000
2-5 years		4,400	5,467	4,600
6-10 years		4,606	5,344	4,581
10+ years		4,659	5,268	4,615
Number of BA	**ANOVA:**	**.668**	**.766**	
One BA		4,524	5,365	4,705
Several BA		4,733	5,310	4,571
Supplier Size	**ANOVA:**	**.343**	**.853**	
Large - More than € 100 million annual revenue		4,893	5,444	5,077
Medium - Between € 10-100 million annual revenues		4,568	5,351	4,216
Small - Less than € 10 million annual revenues		4,321	5,250	4,885
Type of Supplier	**ANOVA:**	**.367**	**.529**	
Direct Material Supplier		4,603	5,235	4,697
Indirect Material Supplier		4,357	5,538	5,083
Service Supplier		4,818	5,818	4,000

4.7 Cooperation

The category that distinguishes ISO 9001 certificated suppliers from the ones that are not, does not provide for any considerable dissimilarities. In terms of cooperation, no noteworthy results are recorded between each specific Business Area either. There is however a distinction between suppliers who serve a single BA and suppliers who supply to several BAs. Suppliers that indicated to supply to more than one Business Area attach more value to cooperation in their relationship with the buyer than suppliers that only serve one Business Area, with a mean of 5,21 and 4,44 respectively. This can largely be attributed to the 6 suppliers serving one Business Area that indicated cooperation to be the least important in their relationship with the buyer, whereas not a single supplier that supplies to several Business Areas perceived cooperation as the least important variable. Moreover, the rating questions that measure cooperation do not support these results of the ranking question, as they contradict each other. Interestingly, the two rating questions demonstrate different patterns. The results of one question shows a positive trend in cooperation from one BA to several BAs, while the other question present a negative trend.
Unlike the number of BAs, the results for both rating questions reveal that cooperation is more important for the same dimension in the category that addresses the material type of the suppliers. In comparison to Indirect Material Suppliers and Service Suppliers, the mean for Direct Material Suppliers is noticeably higher for the results of both rating questions. Additionally, the One-Way ANOVA reveals a significant variance between the dimensions in this category for both questions COO1 and COO2, with a significance of 0,004 and 0,019. The Brown-Forsythe robustness test also demonstrates a significant coefficient (0,003 and 0,035 respectively). The perceived importance of this variable is strikingly similar between these dimensions however. In contrast, a noticeable pattern in perceived importance of cooperation can be found in the category that distinguishes between different lengths of the working relationship between the buyer and suppliers that participated in this study. Similar to the commitment variable, the results display an increasing mean as the length of the working relationship increases.

Lastly, by comparing the means between different supplier size, it is apparent that the medium sized suppliers' relationship with the buyer is characterised by cooperation more than small or large suppliers. This is not reflected by the responses to the ranking question, which illustrate that

large suppliers consider cooperation to be a more important variable in their relationship with the buyer (mean: 5,19), in contrast with medium suppliers (mean: 4,58). Small suppliers seem to attach the least value to the cooperation variable with a mean of 4,33.

Table 4.8 Descriptive Statistics: Cooperation

Dimension per Category		COO1	COO2	Ranking Cooperation
Business Areas				
Denmark		4,710	6,065	5,172
Estonia		5,400	6,000	4,500
Finland		5,000	5,550	5,050
Norway		4,053	5,368	5,471
Poland		4,462	5,846	5,462
Sweden		4,344	5,714	4,742
UK		4,750	6,500	4,667
ISO certification	**ANOVA:**	**.681**	**.397**	
No		4,432	5,917	4,452
Yes		4,278	5,685	4,868
Length of working relation	**ANOVA:**	**.786**	**.837**	
0-1 years		3,750	6,000	4,750
2-5 years		4,200	5,857	4,250
6-10 years		4,333	5,788	4,548
10+ years		4,463	5,659	4,949
Number of BA	**ANOVA:**	**.155**	**.628**	
One BA		4,175	5,806	4,439
Several BA		4,700	5,633	5,207
Supplier Size	**ANOVA:**	**.454**	**.060**	
Large - More than € 100 million annual revenue		4,107	5,393	5,192
Medium - Between € 10-100 million annual revenues		4,568	6,135	4,583
Small - Less than € 10 million annual revenues		4,286	5,593	4,333
Type of Supplier	**ANOVA:**	**.004**	**.019**	
Direct Material Supplier		4,721	5,896	4,875
Indirect Material Supplier		3,286	5,143	4,167
Service Supplier		3,364	5,636	4,200

4.8 Interdependence

The mean of all responses to the rating questions that measure interdependence is 4,56 (INT1) and 4,41 (INT2). It is one of the two variables with a Cronbach's alpha below 0,60, which might be attributed to the fact that the two questions enquire the dependence for different parties, one for the suppliers and one for the buying organisation. Regarding the BAs, the supplier's interdependence between the countries does not depict any distinct results between the dimensions. Furthermore, the number of BAs suppliers are operating in has no influence on the interdependence as the analysis of variance shows a p-value above the significance level of 0,05, which is verified by the Brown-Forsythe test. Likewise, the categories that address ISO certification, size and length of the working relationship between respondents of the questionnaire and the buyer do not offer any noteworthy variances between dimensions. However, supplier type does have an influence on the importance of interdependence in the relationship between the suppliers that participated in this study and the buying organisation. Interdependence is less important in the relationship between service suppliers and the buyer than for direct and indirect material suppliers. Yet, the ANOVA shows no significance in the different means for either the rating or the ranking questions, with a p-value of 0,47, 0,14 and 0,073 respectively.

As mentioned previously, interdependence is the variable that respondents attach the least value to of all the measured key variables, with a mode of 1 and a mean of 2,74. These low results are constant between most dimensions in the different categories. Exceptionally, three suppliers operating in the BA Finland ranked interdependence with 6,00 or 7,00, which is reflected in a higher mean of 3,05. The results also indicate a higher mean for suppliers that are active in Norway. Another statistical outlier is the indirect material supplier type. Four indirect material suppliers ranked interdependence as most important in their relationship with the buyer, which results in a higher mean of 4,50. ISO certified suppliers display a higher average result (3,14) than suppliers without ISO certification (2,41). Furthermore, small suppliers attach more value to interdependence in their relationship with the buyer than larger suppliers do.

Table 4.9 Descriptive Statistics: Commitment

Dimension per Category		INT1	INT2	Ranking Interdependence
Business Areas				
Denmark		4,516	4,419	2,714
Estonia		4,200	4,400	2,600
Finland		5,050	4,850	3,053
Norway		4,421	5,000	3,353
Poland		5,000	4,833	2,000
Sweden		4,694	4,435	2,623
UK		4,000	5,250	1,333
ISO certification	**ANOVA:**	**.591**	**.785**	
No		4,622	4,486	3,143
Yes		4,462	4,404	2,412
Length of working relation	**ANOVA:**	**.802**	**.065**	
0-1 years		4,250	2,750	1,250
2-5 years		4,267	4,600	2,833
6-10 years		4,688	4,281	2,906
10+ years		4,525	4,600	2,725
Number of BA	**ANOVA:**	**.712**	**.165**	
One BA		4,516	4,306	2,633
Several BA		4,552	4,621	2,964
Supplier Size	**ANOVA:**	**.281**	**.319**	
Large - More than € 100 million annual revenue		4,846	4,192	2,640
Medium - Between € 10-100 million annual revenues		4,378	4,649	2,622
Small - Less than € 10 million annual revenues		4,429	4,286	3,000
Type of Supplier	**ANOVA:**	**.470**	**.144**	
Direct Material Supplier		4,561	4,530	2,369
Indirect Material Supplier		4,714	4,429	4,500
Service Supplier		4,091	3,636	3,000

4.9 Satisfaction

The results show that satisfaction overall is relatively high in the examined buyer-supplier relationships, with a mean of 5,91. The categories that address ISO 9001 certification, supplier type and the number of BAs in which the suppliers operate do not record any notable results by comparing their means.

On the other hand, the working relationship length category depicts a downward trend of the means. Suppliers with a relationship of 2-5 years have the highest level of satisfaction among the dimensions with a mean of 6,13. Suppliers with a longer relation (6< years) to the buyer show a slight decrease in satisfaction of the relationship. Relationships between 6-10 years result in a mean of 5,97 and the results for suppliers that have a working relationship of longer than 10 years illustrate a mean of 5,73. This was also apparent by the varying modes between the dimensions. The mode of suppliers in the 10+ dimension was 5,00 whereas the modes in the other measured dimensions was 7,00. Furthermore, it is notable that small suppliers are slightly less satisfied than medium sized and large companies, even if the mode of all three dimensions was 7,00.

Satisfaction is also generally perceived as one of the less important key variables in the relationship between the suppliers and the buying company. It is noticeable that suppliers that are active in the BA Finland perceive satisfaction as less significant for the buyer-supplier relationships than the remaining Nordic countries. The length of the working relationship influences the importance of satisfaction as well. The longer a supplier is in a relationship with the buying company, the less important satisfaction seems to be perceived.

Table 4.10: Descriptive Statistics: Satisfaction

Dimension per Category		SAT1	Ranking Satisfaction
Business Areas			
Denmark		5,935	3,786
Estonia		6,000	4,250
Finland		5,550	3,211
Norway		5,667	3,600
Poland		5,769	3,462
Sweden		5,937	3,836
UK		6,500	5,667
ISO certification	**ANOVA:**	**.296**	
No		5,757	3,909
Yes		6,038	3,745
Length of working relation	**ANOVA:**	**.289**	
0-1 years		6,500	3,000
2-5 years		6,133	4,500
6-10 years		5,969	4,063
10+ years		5,732	3,526
Number of BA	**ANOVA:**	**.231**	
One BA		6,000	3,864
Several BA		5,724	3,778
Supplier Size	**ANOVA:**	**.190**	
Large - More than € 100 million annual revenue		5,929	3,667
Medium - Between € 10-100 million annual revenues		6,167	4,028
Small - Less than € 10 million annual revenues		5,571	3,731
Type of Supplier	**ANOVA:**	**.983**	
Direct Material Supplier		5,896	3,781
Indirect Material Supplier		6,000	3,500
Service Supplier		5,909	4,600

4.10 Trust

For the trust variable, no distinct patterns or differences are found in the Business Area category. In the ISO 9001 certification category, the suppliers that are ISO 9001 certified attach more value to trust than their counterparts that are not certified, with means of 5,00 and 4,36 respectively.

These results are not reflected in the rating questions, where no significant differences are found between these two dimensions. Similarly, service suppliers perceive trust to be more important as direct or indirect material suppliers. Yet, the results do not depict trust to play a larger role in the relationship between the buyer and service suppliers than in the relationship between the buyer and direct or indirect material suppliers.

The length of the working relationship influences the perception of trust as an essential variable in the examined buyer-supplier relationships as well. Suppliers that indicated a working relationship of 6-10 years perceive trust as a less important variable than suppliers with a shorter or longer working relationship. The results of the rating questions do not depict the same image, as there is no dimension where the relationship with the buyer is shown to be distinctively more or less characterised by trust than in other dimensions. In the size category however, trust seems to be less important in the relationship between small suppliers and the buyer. The mean of both the rating questions is lower for smaller suppliers (5,64 and 5,75) than for medium (6,03 and 6,19) and large suppliers (5,82 and 6,29). There is no notable difference found in the results of the ranking question however.

Table 4.11: Descriptive Statistics: Trust

Dimension per Category		TRU1	TRU2	Ranking Trust
Business Areas				
Denmark		5,968	6,226	4,500
Estonia		6,000	6,200	5,800
Finland		5,700	5,950	4,842
Norway		5,684	5,895	4,875
Poland		5,692	5,846	5,231
Sweden		5,797	6,078	4,950
UK		6,500	6,750	5,667
ISO certification	**ANOVA:**	**.891**	**.299**	
No		5,838	5,946	4,364
Yes		5,870	6,167	5,000
Length of working relation	**ANOVA:**	**.572**	**.450**	
0-1 years		5,500	5,750	5,000
2-5 years		5,867	6,333	5,182
6-10 years		6,030	6,121	4,313
10+ years		5,732	6,000	4,974

Number of BAs	**ANOVA:**	**.345**	**.430**	
One BA		5,921	6,127	4,690
Several BA		5,700	6,000	4,893
Supplier Size	**ANOVA:**	**.434**	**.098**	
Large - More than € 100 million annual revenue		5,821	6,286	4,760
Medium - Between € 10-100 million annual revenues		6,027	6,189	4,694
Small - Less than € 10 million annual revenues		5,643	5,750	4,840
Type of Supplier	**ANOVA:**	**1.000**	**.782**	
Direct Material Supplier		5,824	6,059	4,703
Indirect Material Supplier		5,929	6,000	4,167
Service Supplier		5,909	6,364	5,800

4.11 Strategic Potential

A significant variance is found between suppliers that operate in solely one BA and suppliers that supply to more than one BA. The One-Way ANOVA shows a coefficient of 0,013 for STR 2, which is verified by the Brown-Forsythe calculation with a coefficient of 0,003. The variance is clearly noticeable when comparing the means and shows that suppliers active in only one BA (mean: 5,84) find an increased collaboration with the buyer to be less of an incentive than suppliers that are active in several BAs (mean: 6,37). In contrast, the one-way analysis of variance does not display any significant variance between the dimensions in the category that addresses the type of the suppliers. This is also the case for the category that distinguishes suppliers according to the length of the working relationship with the buyer. By comparing the means on the other hand, it is apparent that suppliers increasingly see themselves as a strategic partner of the buying organisation (STR 1) as the length of the working relationships between both parties becomes longer. However, a long working relationship also seems to imply less interest from suppliers in an increased collaboration with the buyer (STR 2). Question STR 3 does not show a pattern between these dimensions.

The assigned category ISO certification provided in terms of strategic potential one significant finding. The question STR3 – *"You are motivated to create or sustain a strategic relationship with Inwido"* shows a significant difference between the dimensions. The p-value of the ANOVA

is 0,049. The means show only a slight difference between the dimensions however. The results to all three questions about the strategic potential with the buying company show notable results between the dimensions in the size category. The results of STR1 demonstrate an increasing mean as suppliers are considered larger. Small suppliers show a mean of 5,36, whereas large supplier, are above the general mean of 5,74 and have a mean of 5,96. Similar results are shown in STR3. The motivation of creating and sustaining a strategic relationship with the buying company is increasing with the size of the company. Worth noting however, is that the results of STR3 can be considered high in all dimensions. This implies a high motivation for the respondents to be a strategic partner of the buying organisation, regardless of any categorisation.

Table 4.12: Descriptive Statistics: Strategic Potential

Dimensions per Category		STR1	STR2	STR3
Business Areas	**ANOVA:**			
Denmark		5,903	6,290	6,677
Estonia		6,200	6,200	6,800
Finland		6,200	6,300	6,750
Norway		5,579	6,105	6,474
Poland		5,923	6,615	6,615
Sweden		5,734	6,109	6,641
UK		7,000	6,750	6,750
ISO certification	**ANOVA:**	**.207**	**.961**	**.049**
No		5,541	6,027	6,378
Yes		5,889	6,037	6,685
Length of working relation	**ANOVA:**	**.225**	**.374**	**.391**
0-1 years		5,750	5,500	7,000
2-5 years		5,400	6,333	6,400
6-10 years		5,515	6,030	6,636
10+ years		6,049	5,927	6,463
Number of BAs	**ANOVA:**	**.767**	**.013**	**.081**
One BA		5,714	5,841	6,444
Several BA		5,800	6,367	6,733
Supplier Size	**ANOVA**	**.162**	**.153**	**.168**
Large - More than € 100 million annual revenue		5,964	6,000	6,679
Medium - Between € 10-100 million annual revenues		5,865	6,216	6,595
Small - Less than € 10 million annual revenues		5,357	5,750	6,321
Type of Supplier	**ANOVA:**	**.514**	**.439**	**.833**
Direct Material Supplier		5,8382	6,0441	6,5147

Indirect Material Supplier	5,6842	5,8947	6,5789
Service Supplier	5,7059	6,2353	6,7059

4.12 Summary of Results

To sum up, the results of the conducted study established an overview of the current relationship between the suppliers and the buying company. Additionally, the results illustrated the perceived importance of the key variables between dimensions in supplier categories. Table 4.13 illustrates a summary of the results. The table utilises three different symbols to illustrate the level of variance between the dimensions in each category and distinguishes between strong, moderate and weak, which is transferred into a score from 3 (strong) to 1 (weak). These scores are added up for each potential supplier category to create an overview of which category demonstrates the largest variances between dimensions and thus has the largest potential to be utilised by the buying organisation to manage the examined buyer-supplier relationships and therefore supplier quality. The next chapter discusses the results with the aim to achieve the fourth and last objective required for answering the research question.

Table 4.13 Summary of the Results

	Adaptation		Commitment		Communication		Cooperation		Interdependence		Satisfaction		Trust		Total
	Rating	Ranking	Rating	Ranking	Rating	Ranking	Rating	Ranking	Rating	Ranking	Rating	Ranking	Rating	Ranking	score
Business Areas	▽	▽		◇	▽					▽		▽			8
Number of Business Areas		▽						◇							3
Supplier type	◇	◇				▽	▲		▽					◇	**11**
ISO certification		▽	▲							◇				▽	7
Length of working relation				◇				◇			◇	▽		▽	8
Size of suppliers	▽	◇	▲	▽	◇	◇		◇		▽	▽		◇		**17**

Degree of variance		Score
Strong	▲	3
Moderate	◇	2
Weak	▽	1

5 Analysis and Discussion

To optimally address the fourth and last objective required to answer the research question, each potential supplier category is touched upon in a separate section. This structure allows for a clear analysis of each distinct supplier category, to eventually assess which of these supplier categories can be useful for the buying organisation to manage the relationships with suppliers and in turn supplier quality. The scores that were given to each supplier category in table 4.13 create a foundation for the discussion of these supplier categories. The categories are discussed according to the scores (the two categories that address the Business Areas are examined in the same section), where the categories with the lowest scores and thus demonstrate the least variance between dimensions, are touched upon first. The variances between dimensions in supplier categories that are found to be useful are presented graphically to support the management of these differences. Before the detailed analysis of these supplier categories, the strategic potential of the suppliers is discussed. Lastly, the conceptual framework is revised according to the findings.

5.1 Discussion of Strategic Potential

First and foremost, it is essential to understand that the positive results of the three questions about strategic potential provide favourable circumstances to utilise supplier categories in strategic buyer-supplier relationships to manage quality. Without suppliers' ambition or intention to engage in strategic buyer-supplier relationships, this purpose can be considered futile. Nevertheless, as the results show a definite willingness to do so, the conceptual framework that was introduced in this study can be revised and contribute to the existing literature.

As the results demonstrated, the perceived importance of increased collaboration with the buyer significantly varies between suppliers that operate in one BA and suppliers that operate in several BAs. The eagerness for a closer collaboration with the buyer can be derivative from the increasing dependence that suppliers experience when they become operational in more BAs, which can imply high switching costs (Williamson, 1979). An increased collaboration could then be a method for ensuring future commerce from this buyer. This is particularly crucial as

increased collaboration often prompts a buyer to decrease the number of suppliers and work more closely with a restricted supplier base (Spekman et al., 1998). Suppliers seem to understand this and are therefore increasingly interested in a closer collaboration as they operate in more BAs and have more potential revenues to lose.

Furthermore, it can be established that as the working relation between the buying organisation and its suppliers lengthens, suppliers increasingly perceive themselves as a strategic partner of the company. This demonstrates the ability of the buyer to gradually develop relationships with its suppliers, which is undoubtedly also an outcome of suppliers that perform below expectations gradually being filtered out of the supplier base (Sarkar and Mohapatra, 2006). The suppliers that do comply with the buying organisations' requirements seem to be rewarded with the opportunity to engage in a strategic relationship. As can be expected, an increased collaboration is then perceived as less of an incentive as the length of the working relation increases. Suppliers that perceive themselves as strategic partners of the buyer have little interest in a closer collaboration as they might already have reaped all potential benefits.

Generally, most suppliers that participated in this study see themselves as strategic partners and the minority that does not has the desire to establish a strategic relationship with the buying organisation. This thus provides the opportunity for the cooperating buying organisation to utilise the revised conceptual framework to manage quality. Furthermore, a margin for improvement exists as not all suppliers that are eager to engage in a strategic relationship with the buyer perceive themselves in one.

5.2 Business Areas

This section includes the discussion about two potential supplier categories that are related to the Business Areas suppliers operate in. One category distinguishes between suppliers that supply to the different Bas. The other category does not take each specific BA into consideration, but solely divides the suppliers that supply to one BA from the suppliers that are active in several BAs.

Starting with the variances between specific BAs, commitment is perceived as more important for suppliers that operate in Denmark than suppliers active in other areas. As this supplier category is highly tailored to the needs of the cooperating buying organisation, literature that explains this variance between specific BAs is non-existent. This also implies that generalisation of the results related to this specific supplier category is impractical. For the supplier category that solely considers the number of BAs the suppliers are active in, cooperation is perceived as a more important variable in the relationship with the buyer for suppliers that operate in several BAs. A deduction that can be made from this result is that suppliers value cooperation more as they become involved with more parts of the buying organisation.

Yet, these two categories both do not demonstrate sufficient variances between its dimensions to consider as valuable for managing the examined buyer-supplier relationships. For future research, dimensions could be altered so that they reflect geographical areas that are not specific to a certain firm, which allows any potential related findings to be generalised.

5.3 ISO 9001 Category

Important to note in this category is that the buying company does not require ISO certification of its suppliers. Instead, audits are performed to control supplier quality. As previously mentioned (see section 2.6), there is thus no external pressure from the buyer to become ISO certified, which allows this to become a criterion for distinction between two supplier groups.

To begin with, suppliers that are ISO 9001 certified attach more value to trust in their relationship with the buyer than their counterparts who are not. The ISO certification seems thus not to act as a mechanism for suppliers to degrade the importance of trust, despite already adhering to a certain set of standards. This notion supports the findings of Walgenbach (2001), who argues for the ISO 9000 certification series not being a driver of trust between buyers and suppliers, as it was intended to.

The most significant variance between the two dimensions in this supplier category, was found for the commitment variable. More specifically, for the results to question COMI2, which

enquires about the commitment of the suppliers to their relationship with the buyer. ISO 9001 certified suppliers are more committed to their relationship with the buyer than suppliers that are not ISO 9001 certified. However, literature on the effects of ISO certification on commitment between buyers and suppliers is limited. This finding can thus not be supported or disproved by other scholars, which can prove to be an implication for future research. Furthermore, COMI1 did not display any significant variances. This question emphasised the long-term aspect of the commitment variable, as previously explained in section 2.4.2. However, this might have been perceived as an issue separately from commitment, which explains why the ANOVA test did find any significant differences between for COMI2, but not for COMI1.

The higher perceived importance of interdependence by non-certified suppliers can be explained by Singels et al. (2001). Singels et al. (2001) argues that ISO certification can provide a competitive advantage and customer satisfaction, which makes ISO certified suppliers a more attractive alternative for buyers. The customer range for suppliers who do not reap these benefits is therefore narrowed, which makes them more dependent upon buyers that do not require ISO certification, such as the buying organisation that is cooperating in this study. Furthermore, although Singels et al. (2001) proposes the notion that ISO certification leads to a reduction in claims from the customer, which might subsequently increase satisfaction with suppliers, the results do not depict any variances in satisfaction between these two dimensions.

All things considered, the variances found between dimensions do not suffice to present this category as a means for managing buyer-supplier relationships, and in turn supplier quality. Therefore, this study does not consider ISO 9001 certification to be a valid criterion for supplier categorisation.

5.4 Length of Working Relationship

An interesting but worrying finding for the buying organisation, is the gradual decrease of satisfaction with suppliers about the working relation with the buyer, which is also in line with the finding that an increased collaboration with the buyer becomes less of an incentive for suppliers as the working relation lengthens. Besides profitability, Vos, Schiele and Hüttinger

(2016) propose reliability and growth potential as factors that affect supplier satisfaction. The latter factor offers an explanation to this gradual decrease in satisfaction, in combination with the lesser interest in an increased collaboration as the working relation extends (STR2). As time passes, suppliers might perceive to have exploited all the existing growth opportunities within the buying organisation and see no further growth potential. Therefore, a slight decrease in satisfaction could occur.

Contrarily, the perceived importance of cooperation increases gradually with a longer working relation between the buyer and suppliers. However, the results only demonstrate a slight increase in cooperation in relation to forecast and planning as the relationship between the buyer and suppliers extends, not in relation to quality practices. These findings thus only partially support the claims of Squire, Cousins and Brown (2009), who argue that as buyer-supplier relationships develop over time, cooperation between both parties is positively affected. Similarly, more value is attached to commitment if suppliers are in a longer working relation with the buyer. This provides an opportunity for the buying organisation to ensure a continuous flow of materials and services by their long-term suppliers.

The dimensions used in this category could be improved for future purposes. As stated in the results (chapter 4), the dimension that addressed suppliers with a working relation with the buyer of 0-1 years was omitted due to a low representation of this dimension. The other dimensions are sufficiently represented but show few valid distinctions between them. Therefore, a restructuring of the dimensions can be considered. One alternative is to assign two years per dimension. This requires a large sample size but could provide new valuable insights. Nevertheless, as this supplier category currently demonstrates few significant variances between dimensions, it is not considered valuable for the management of buyer-supplier relationships.

5.5 Identification of Valid Supplier Categories

The results of this study identify two supplier categorisations that show compelling variances between dimensions. The key variables for which variances are found are required to be managed

differently, depending on the dimension. This section discusses these two valid supplier categories.

5.5.1 Type of Suppliers

This category received a total score of 11 after analysing the results as displayed in table 4.13 and was thus the category with the second most variances between dimensions. To begin with, it can be pre-empted that the major variances occurred between material suppliers (direct and indirect) and service suppliers. It is therefore more important to distinguish between the two types namely material suppliers and service suppliers. This can be an improvement that can be made to the dimensions of this category in the future. Nevertheless, in this thesis, a distinction between direct and indirect material suppliers is still made.

Adaptation is more apparent in the relationship between the buyer and service suppliers than in the relationship between the buyer and direct or indirect material suppliers. Mukherji and Francis (2008) claim that adaptation is usually higher as firms become more dependent on a buyer. Literature, such as Mukherji and Francis (2008), does not make the distinction between service, direct- and indirect suppliers however. The findings of this thesis could thus add an original perspective to the adaptation literature. Contradicting the claims of Mukherji and Francis (2008) however, is that interdependence is less apparent in the relationship between service suppliers and the buying organisation, than in the relationship between material suppliers and the buyer. This discredits their notion that adaptation increases with a higher dependence towards the buyer, which again provides an argument to take the distinction between material and service suppliers into consideration as these dimensions prove to behave differently in some respects. An explanation to why service suppliers adapt their processes more to the buyer's requirements could then be that there are few fixed standards when it comes to services, which forces the buyer to state detailed requirements to which the supplier must conform (Kahraman, Cebeci and Ulukan, 2003).

The most significant variance in this category was found in relation to cooperation. Direct material suppliers have a relationship with the buyer that is substantially more characterised by cooperation in relation to quality practices, forecasting and delivery planning. Without the steady

delivery of raw materials, the production process of the buying organisation could experience interruptions. Therefore, direct material suppliers might be enticed to cooperate more with the buying organisation than their counterparts who do not supply direct materials to the buyer. Nevertheless, the results show that indirect material and service suppliers are equally interested in cooperation with the buyer than the direct material suppliers. Cooperation can thus be a source for improvement in this category.

Lastly, service suppliers perceive trust in their relationship with the buyer as more important than material suppliers. However, trust is yet considered high between the respondents and the buyer. Consequently, other variables can currently be prioritised in the management of the examined buyer-supplier relationships. Figure 5.1 illustrates a radar diagram which summarises the variances in perceived importance of the variables between the different types of suppliers.

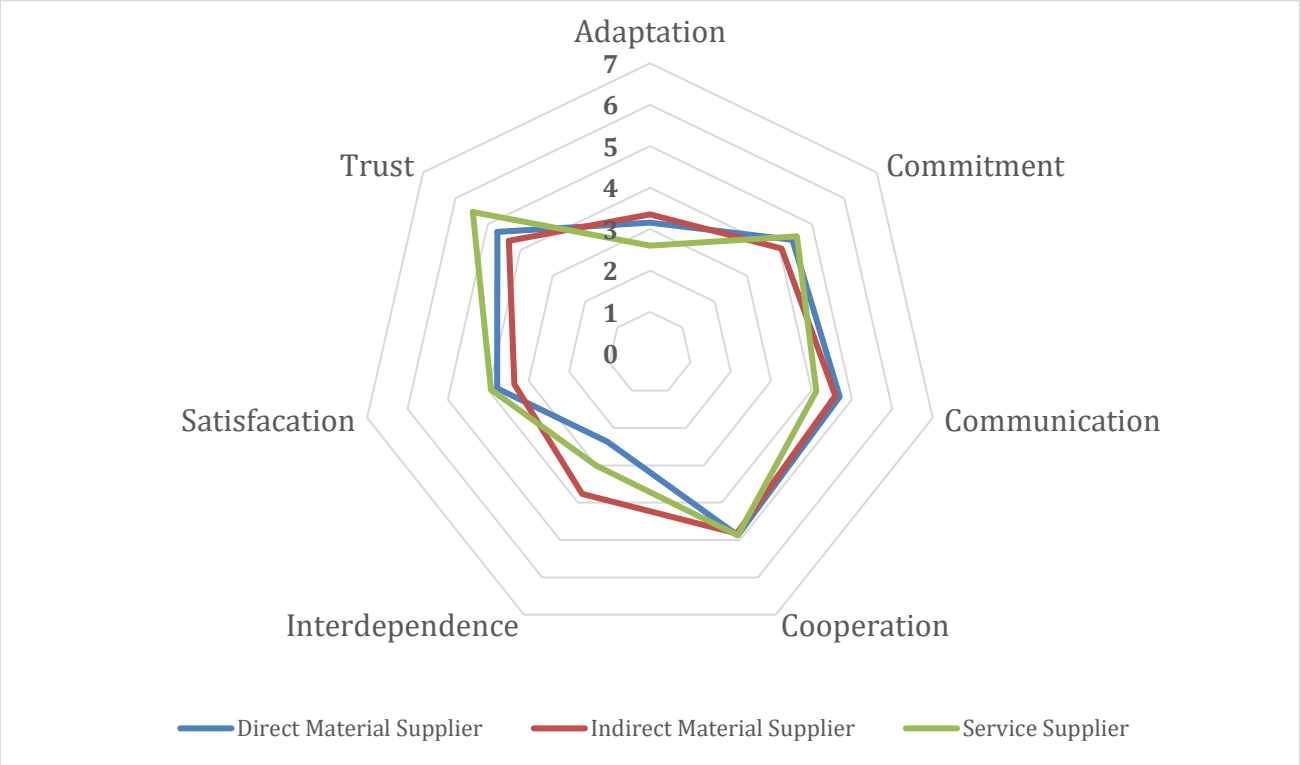

Figure 5.1 Summary Radar: Type of Suppliers

5.5.2 Size of Suppliers

This supplier category achieved the highest score in variances in table 4.13 and is thus considered the category with the greatest variances between dimensions. A first variance was found for the

adaptation variable, where large suppliers perceive adaptation as much less important in their relationship with the buyer than smaller suppliers do. Moreover, a pattern is noticeable where adaptation is perceived as less important as the size of a supplier becomes larger. This might be the result of large suppliers having a larger customer base than their smaller counterparts, which makes adaptation to each individual customer's requirements less of a priority for them. However, the results do demonstrate large suppliers adapting their processes to the requirements of the buying company to a slightly larger extent than smaller suppliers. Large suppliers thus adapt to the requirements of the buying organisation despite not perceiving it as an important variable in their relationship with the buyer. An explanation to these conflicting findings could be due to the notion that adaptation is positively related with the power of the buyer (Brennan, Turnbull and Wilson, 2003). Large suppliers may thus yet feel pressured to adapt to the requirements of the buying organisation since it is such a substantial player in the market (Inwido AB, 2018).

In this study, commitment is found to be the most crucial variable for large suppliers. The increasing trend from small to large suppliers in commitment demonstrates that size influences the effort that suppliers put in to maintain and improve their relationship with the buying organisation. However, it is important to note that medium suppliers attach more value to the commitment variable in their relationship with the buyer. Nevertheless, the relationship between the buying organisation and its suppliers is already highly characterised with commitment, which leaves little room for improvement regarding this variable.

In terms of communication, the flow of information about performance (COM1) is found to increase with the size of the supplier and likewise the mutual exchange of information about events or changes that may affect the other party (COM2) demonstrate a slightly positive trend. This pattern is in alignment with the commitment variable. However, small and large suppliers perceive communication to be one of the most crucial variables in the conceptual framework. This finding is confirmed by Paulraj, Lado and Chen (2007) who stated that communication between organisations is an essential factor in fostering strategic buyer-supplier relationships. What is more, Paulraj et al. (2007) proposed for further research to take trust and commitment into consideration, which this study does.

Also for the trust variable, considerable differences between dimensions were found. Smaller suppliers have a relationship that is less characterised by trust than larger suppliers. This might be due to the characteristics of small suppliers, who tend to be managed by the owners, are built upon personal relationships and are sceptical towards larger bureaucratic firms (Spence, 1999). Furthermore, as a similar pattern is found in the perception of cooperation as an important variable in the relationship between the buyer and its suppliers, it could be argued that smaller suppliers fear to cooperate extensively with the buying company because of a greater power difference. The claims of Colombo (1995) support this notion, as it is argued that smaller firms do not always can retaliate against opportunism of larger firms, which is one of the reasons why they are less inclined to engage into collaborative ventures. Small suppliers might thus fear to be exploited by the larger buying organisation.

Satisfaction has no significant characteristics between the dimensions and generally all suppliers are relatively satisfied with their relationship with the buying organisation. One reason for this indifference between the dimensions could be the influence of the other variables on satisfaction. Mohr and Spekman (1994) constructed a framework that illustrates communication behaviour, coordination, interdependence and trust as different aspects that influence satisfaction. Furthermore, as these factors influence small, medium and large suppliers differently, satisfaction does not demonstrate a clear pattern between these dimensions.

To conclude, the variances present in this supplier category do provide the opportunity to utilise these differences between dimensions in the management of the examined buyer-supplier relationships, to ultimately manage supplier quality. Figure 5.2 illustrates the variances in perceived importance for each variable between the dimensions.

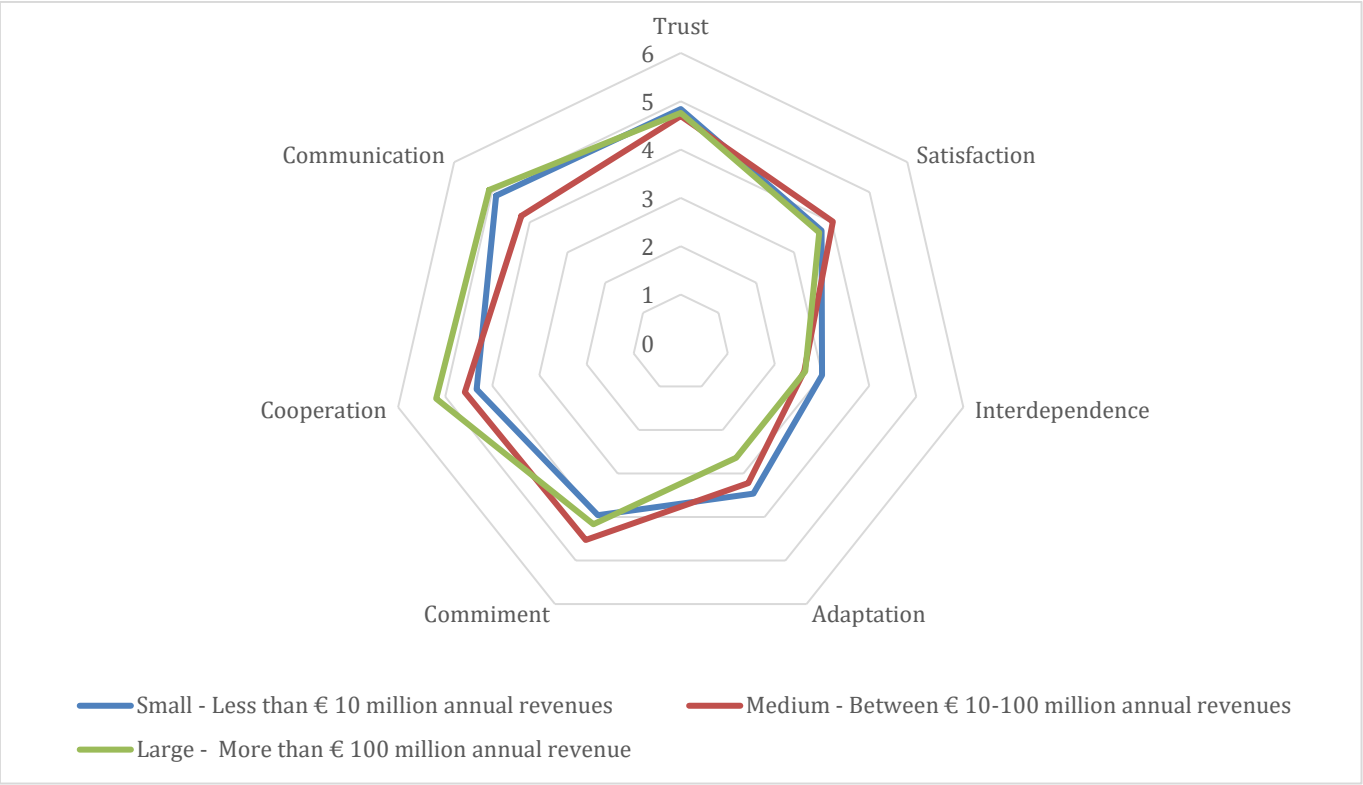

Figure 5.2 Summary Radar: Size of Suppliers

The discussion of the results above identified two valid supplier categories, relevant for the buyer-supplier relationships regarding the buying company. The remaining categories were discussed, but due to insufficient variances eliminated. The results found the size of suppliers as well as supplier type having sufficient variance between their dimensions. Consequently, the fourth objective of this study is achieved. The following section revises the conceptual framework developed in the literature review with the purpose to answer the research question of this thesis.

5.6 The Whole Picture - Revised Theoretical Framework

The analysis and discussion of the empirical data created an understanding of how the key variables vary between dimensions in each examined supplier category. During the discussion, four potential categories were eliminated due to insufficient variances between dimensions. Insufficient variances between dimensions limits the value of utilising supplier categories to manage buyer-supplier relationships effectively. Yet, two supplier categories were found to have sufficient variances between dimensions for their utilisation in buyer-supplier relationship

management. This creates the need to revise the original conceptual framework, which captured the interrelations between buyers and suppliers and the seven key variables in the buyer-supplier relationship and was based upon empirical and theoretical literature.

As two supplier categories are found to be valuable for managing the examined buyer-supplier relationships, it is required to present two revised frameworks, one for each category. Figure 5.3 and 5.4 illustrate the two revised frameworks. In comparison to the initial framework, lines connect the categories with each individual variable. The (+) or (-) signs indicate which variable demonstrated valuable variances and thus can be emphasised when utilising the supplier category in question to manage buyer-supplier relationships.

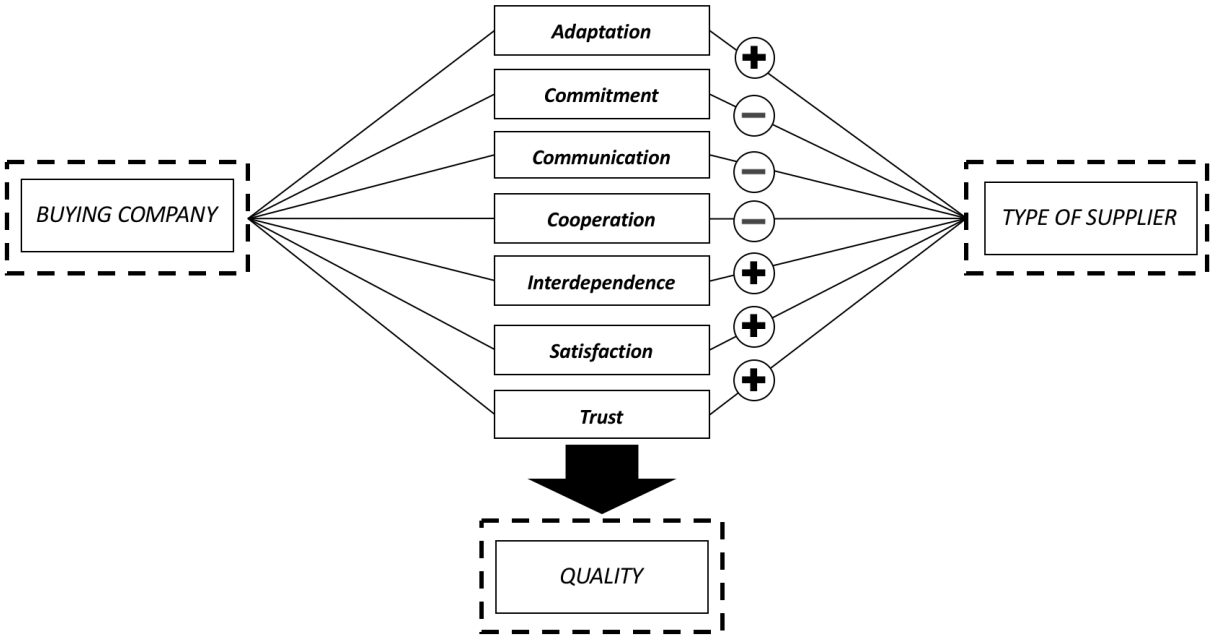

Figure 5.3 Revised Conceptual Framework: Type of Suppliers

For the supplier category that distinguishes between service, direct- and indirect material suppliers, the analysis of the empirical data suggests four variables that demonstrate meaningful differences between the dimensions. Thus, the potential utilisation of this supplier category implies an emphasis on adaptation, interdependence, satisfaction and trust to manage the examined buyer-supplier relationships successfully.

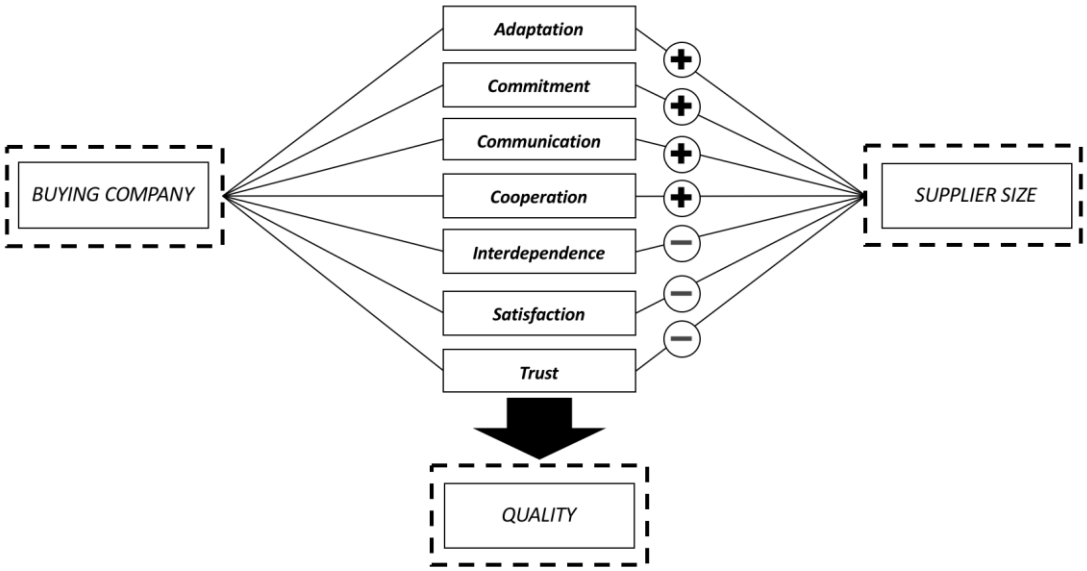

Figure 5.4 Revised Conceptual Framework: Supplier Size

For the category that distinguishes between small, medium and large suppliers, the analysis proposes relevant variances for adaptation, commitment, communication and cooperation. These four variables provide the potential for the buyer-supplier relationships to be managed more effectively in relation to supplier size. The empirical data shows that interdependence, trust and satisfaction are variables that may require less attention when utilising this supplier category.

Based upon these key variables, the revision of the original conceptual framework concludes the identification of valid supplier categories relevant for managing the examined buyer-supplier relationships. In stride with existing literature, this thesis thus demonstrates that supplying organisations cannot be treated as identical, which requires a distinctive management approach. The identification of differences between dimensions in supplier categories thus enables a more effective management approach towards buyer-supplier relationships. Hence, the fourth objective of this thesis is achieved. With the development of two conceptual frameworks and illustration of patterns and variances between dimensions of supplier categories, objective three and two were achieved as well. Furthermore, as also the connection between buyer-supplier relationships and supplier quality management was made through the revision of existing literature, the research question found below is answered.

"How can the categorisation of suppliers in strategic buyer-supplier relationships be utilised to manage supplier quality"

Lastly, as the empirical data indicates suppliers to perceive themselves as strategic partners and be eager to collaborate closer with the buyer, which allows them to jointly gain a competitive advantage, the previously mentioned criteria for the buyer-supplier relationships to be strategic are fulfilled (see section 2.4).

6 Conclusion

A strategic relationship between buyers and suppliers was increasingly emphasised in recent decades and was identified as a method to jointly develop quality and achieve a competitive advantage (Noshad and Awasthi, 2015) (Spekman,1988). The need to establish an affiliation between quality and buyer-supplier relationships was therefore expressed in the beginning of this thesis. The empirical research in this thesis thus focused on the management of these strategic buyer-supplier relationships with the aim to develop and maintain supplier quality. In doing so, valid supplier categories were successfully identified through the analysis of any existing variances between their dimensions, with respect to seven variables that are key to buyer-supplier relationships. This thus supports the notion that suppliers cannot be treated as identical and require a distinctive management approach with respect to the applied supplier categorisation. By making this distinction and establishing the connection between strategic buyer-supplier relationships and supplier quality management the research question can be answered:

"How can the categorisation of suppliers in strategic buyer-supplier relationships be utilised to manage supplier quality?".

The four objectives identified in the first chapter served as a guide for ultimately answering this research question and are concluded next.

- *Demonstrate the connection between buyer-supplier relationships and supplier quality management.*

  Strategic buyer-supplier relationships have a positive impact on supplier quality. By reviewing the selected literature regarding Supplier Quality Management and Supplier Chain Quality Management a connection between quality management and buyer-supplier relationships was established. Among others, the buyer-supplier relationship was found to constitute a critical determinant of quality management. Hereby, the first objective is achieved which creates a need to enquire about the factors influencing buyer-supplier relationships.

- *Develop a conceptual framework based upon the identified key variables in buyer-supplier relationships.*

  Seven key variables were identified to be essential in the buyer-supplier relationship. These key variables were incorporated into the conceptual framework introduced in this thesis and represent the connection between buyer and supplier. The link between buyer-supplier relationships and supplier quality is illustrated in the conceptual framework as well.

- *Demonstrate patterns and variances between dimensions of potential supplier categories.*

  The conceptual framework constitutes the basis for the third objective of this thesis. The demonstration of patterns and variances between dimensions of potential supplier categories was achieved through the statistical analysis of the gathered empirical data. Several patterns and variances between dimensions were identified which enabled the discussion of the validity of each individual supplier category.

- *Identify valid supplier categories relevant in specific buyer-supplier relationships based upon the utilisation of the key variables.*

  Two supplier categories were found to display sufficient valuable variances between dimensions and could thus be considered valuable for managing the examined strategic buyer-supplier relationships. More specifically, the supplier categories that in this study were found to be valuable for this purpose distinguished between small, medium and large suppliers, and service, direct- and indirect material suppliers. By addressing the variances of the key variables between dimensions in these supplier categories, strategic buyer-supplier relationships can help to successfully manage supplier quality. It can thus be concluded that these two supplier categories support the management of strategic buyer-supplier relationships, and in turn supplier quality.

6.1 Managerial implications

The managerial implications of this thesis are twofold. The first part of this section addresses the general implications, whereas the second part focuses on implications specific to the cooperating buying organisation.

First and foremost, the findings of this paper might have applicable implications not only for managers of manufacturing companies but might also be applicable in different settings. The demonstration of variances between dimensions in different supplier categories generally implies that suppliers should not be treated as identical. The identification and understanding of these variances can improve the management of strategic buyer-supplier relationships when acted upon. However, as this study solely examines strategic buyer-supplier relationships with the same buyer, managers from other industries need to incorporate the ideas of this thesis with caution and identify supplier categories that are adapted to their industry and situation.

Second, for the focal buying organisation several managerial implications are apparent. The suppliers that participated in this study indicate certain eagerness in sustaining and engaging further in a strategic relationship with the buyer, which provides a solid foundation for the improvement of the status quo. Furthermore, the supplier categories identified in this thesis as valuable are based upon the responses of the suppliers of the buying organisation. Consequently, the empirical findings are tailored to the practical settings of the buyer. The categories that distinguish between small, medium and large suppliers, and service, direct- and indirect material suppliers can thus be taken into consideration for practical use.

6.2 Theoretical implications

From a theoretical perspective, this thesis contributes in the form of a developed and revised theoretical model inspired by the framework utilised by Fynes and Voss (2002) that defines relationship strength. The conceptual framework is created by drawing upon several other theoretical frameworks and tested in an empirical setting, which allows for a contribution to management literature such as buyer-supplier relationship, quality management, supplier

categorisation and supplier quality management literature. Further contributing to this literature is the novel perspective of this thesis by distinguishing suppliers with dissimilar characteristics, rather than treating all suppliers identically.

Additionally, the introduction of this thesis raised a need to establish the affiliation between supplier quality and buyer-supplier relationships, which was already addressed by a number of scholars. This thesis further satisfies this need by pairing and reviewing literature that addresses this connection between buyer-supplier relationships and supplier quality management.

Lastly, this thesis contributes empirical research to the list of research and practices reviewed by Noshad and Awasthi (2015) and thereby helps narrow their identified research gap that is the effect of buyer-supplier relationships on supplier quality management practices. This research gap does require further attention in future research.

6.3 Limitations and Future Research

Practical and theoretical implications discussed above should be reflected upon in light of the limitations that arose during this study. These research limitations provide guidance for future research and other scholars to build upon.

First and foremost, the empirical research in this thesis was conducted from a unilateral perspective, since soley the suppliers' viewpoint was examined. Although this is particularly beneficial for the cooperating buying organisation, empirical inquiry about buying organisations' perspective regarding this topic can complement the conceptual frameworks presented in this thesis. This matter is therefore subject to future research.

Moreover, although the concept of strategic buyer-supplier relationships is overarching and not limited to a single industry, the supplier categorisation criteria applied in this research are derivative from a specific buying company's situation. The amount of supplier categorisation possibilities discussed in this study are thus restricted and the specific supplier categories found to be valuable for the examined strategic buyers-supplier relationships are subject to limited

generalisability. Future research could therefore address this issue from an inter-industry perspective, to assess how the variances and correlations found in this thesis alter between industries. Furthermore, as time and resource constraints limited the sample response rate, the findings of this study can be further elaborated upon with a larger sample.

Lastly, the identified key variables in this thesis are based upon a traditional literature review, which restricted the findings to variances in relation to these seven identified key variables in buyer-supplier relationships. Practices and theory might provide additional applicable variables, which creates the opportunity for revising the conceptual frameworks introduced in this thesis.

References

Alvesson, M., & Skoldberg, K. ,2009. positivism, social constructionism, critical realism: Three reference points in the philosophy of science. *Reflexive methodology: New vistas for qualitative research*, 15-52.

Anawalt, B.D., 2016. The Model T.

Anderson, J.C. and Narus, J.A., 1990. A model of distributor firm and manufacturer firm working partnerships. *the Journal of Marketing*, pp.42-58.

Anderson, J. C., Rungtusanatham, M., Schroeder, R. G., & Devaraj, S. ,1995. A path analytic model of a theory of quality management underlying the Deming management method: preliminary empirical findings. *Decision sciences*, *26*(5), 637-658

Argyres, N.S. and Zenger, T.R., 2012. Capabilities, transaction costs, and firm boundaries. *Organization Science*, 23(6), pp.1643-1657.

Bedey, L., Eklund, S., Najafi, N., Wahrén, W. and Westerlund, K., 2009. *Purchasing management.*

Bensaou, M., 1999. Portfolios of buyer-supplier relationships. *MIT Sloan Management Review*, *40*(4), p.35.

Bland, J.M. and Altman, D.G., 1997. Statistics notes: Cronbach's alpha. Bmj, 314(7080), p.572.

Bryman, A., & Bell, E. , 2015. *Business research methods*. Oxford University Press, USA.

Cai, S. and Yang, Z., 2008. Development of cooperative norms in the buyer-supplier relationship: the Chinese experience. *Journal of Supply Chain Management*, *44*(1), pp.55-70.

Casciaro, T. and Piskorski, M.J., 2005. Power imbalance, mutual dependence, and constraint absorption: A closer look at resource dependence theory. *Administrative science quarterly*, 50(2), pp.167-199.

Cho, T.S. and Hambrick, D.C., 2006. Attention as the mediator between top management team characteristics and strategic change: The case of airline deregulation. *Organization Science*, *17*(4), pp.453-469.

Coase, R.H., 1937. The nature of the firm. economica, 4(16), pp.386-405.

Colombo, M.G., 1995. Firm size and cooperation: the determinants of cooperative agreements in information technology industries. *International journal of the economics of business*, 2(1), pp.3-30.

Cooper, M.C., Lambert, D.M. and Pagh, J.D., 1997. Supply chain management: more than a new name for logistics. *The international journal of logistics management*, *8*(1), pp.1-14.

Corsten, D. and Felde, J., 2005. Exploring the performance effects of key-supplier collaboration: an empirical investigation into Swiss buyer-supplier relationships. International Journal of Physical Distribution & Logistics Management, 35(6), pp.445-461.

Das, T. K., & Teng, B. S. ,1998. Between trust and control: Developing confidence in partner cooperation in alliances. *Academy of management review*, *23*(3), 491-512.

Das, T. K., & Teng, B. S. ,2000. A resource-based theory of strategic alliances. *Journal of management*, *26*(1), 31-61

De Toni, A., Nassimbeni, G., & Tonchia, S. ,1994. New trends in the supply environment. *Logistics Information Management*, *7*(4), 41-50.

Dillman, D.A., 2011. *Mail and Internet surveys: The tailored design method--2007 Update with new Internet, visual, and mixed-mode guide.* John Wiley & Sons.

Dorgelo, J. and van Weele (AJ), 2000. Supplier Quality Assurance. Technische Universiteit Eindhoven.

Dwyer, F.R., Schurr, P.H. and Oh, S., 1987. Developing buyer-seller relationships. *The Journal of marketing*, pp.11-27.

Dyer, J.H., 1997. Effective interfirm collaboration: how firms minimize transaction costs and maximize transaction value. *Strategic management journal*, pp.535-556.

Easterby-Smith, M., Thorpe, R., & Jackson, P. R. ,2015. *Management and business research*. Sage.

Edvardsson, B., Johnson, M.D., Gustafsson, A. and Strandvik, T., 2000. The effects of satisfaction and loyalty on profits and growth: products versus services. *Total quality management*, 11(7), pp.917-927.

Elshaer, I.A. and Augustyn, M.M., 2016. Direct effects of quality management on competitive advantage. *International Journal of Quality & Reliability Management*, 33(9), pp.1286-1310.

Essig, M. and Amann, M., 2009. Supplier satisfaction: Conceptual basics and explorative findings. *Journal of purchasing and supply management*, *15*(2), pp.103-113.

Foster Jr, S.T., 2008. Towards an understanding of supply chain quality management. *Journal of operations management*, 26(4), pp.461-467.

Flynn, B.B., Schroeder, R.G. and Sakakibara, S., 1995. The impact of quality management practices on performance and competitive advantage. *Decision sciences*, 26(5), pp.659-691.

Flynn, B.B. and Flynn, E.J., 2005. Synergies between supply chain management and quality management: emerging implications. *International Journal of Production Research*, 43(16), pp.3421-3436.

Frödell, M., 2011. Criteria for achieving efficient contractor-supplier relations. *Engineering, Construction and Architectural Management*, 18(4), pp.381-393.

Fynes, B. and Voss, C., 2002. The moderating effect of buyer-supplier relationships on quality practices and performance. *International journal of operations & production management*, 22(6), pp.589-613.

Ganesan, S., 1994. Determinants of long-term orientation in buyer-seller relationships. *the Journal of Marketing*, pp.1-19.

Gelderman, C.J. and Mac Donald, D.R., 2008. Application of Kraljic's purchasing portfolio matrix in an undeveloped logistics infrastructure: the Staatsolie Suriname case. J. Transnatl. Manag. 13 (1), 77–92.

Gelderman, C.J. and Van Weele, A.J., 2003. Handling measurement issues and strategic directions in Kraljic's purchasing portfolio model. *Journal of purchasing and supply management*, 9(5-6), pp.207-216.

González-Benito, J., Martínez-Lorente, A.R. and Dale, B.G., 2003. A study of the purchasing management system with respect to total quality management. *Industrial Marketing Management*, 32(6), pp.443-454.

Gulati, R., 1998. Alliances and networks. *Strategic management journal*, 19(4), pp.293-317.

Hallén, L., Johanson, J., & Seyed-Mohamed, N. ,1991. Interfirm adaptation in business relationships. *The Journal of Marketing*, 29-37.[DE1]

Hamel, G. and Prahalad, C.K., 1990. Strategic intent. *Harvard Business Review, 68(3)*, pp.18-38.

Han, S.L., Wilson, D.T. and Dant, S.P., 1993. Buyer-supplier relationships today. *Industrial Marketing Management*, 22(4), pp.331-338

Handfield, R.B. and Bechtel, C., 2002. The role of trust and relationship structure in improving supply chain responsiveness. *Industrial marketing management*, 31(4), pp.367-382.

Heide, J.B. and John, G., 1990. Alliances in industrial purchasing: The determinants of joint action in buyer-supplier relationships. *Journal of marketing Research*, pp.24-36.

Hillman, A.J., Withers, M.C. and Collins, B.J., 2009. Resource dependence theory: A review. *Journal of management*, 35(6), pp.1404-1427.

Houlihan, J.B., 1988. International supply chains: a new approach. *Management Decision*, *26*(3), pp.13-19.

IBM. 2018. IBM SPSS Software. [ONLINE] Available at: https://www.ibm.com/analytics/data-science/predictive-analytics/spss-statistical-software.
[Accessed 23 April 2018].

Inwido AB, 2018. Annual Report, [ONLINE] Available at: https://www.inwido.com/media/press-releases/detail?releaseIdentifier=E40595FD4D30F1F6
[Accessed on: 16.04.2018]

ISO, B., 2000. 9001: 2008 Quality management systems. Requirements. *International Organization for Standardization.*

Jack, E.P. and Powers, T.L., 2015. Managing strategic supplier relationships: antecedents and outcomes. *Journal of Business & Industrial Marketing*, 30(2), pp.129-138.

Jiang, Z., Henneberg, S.C. and Naudé, P., 2011. Supplier relationship management in the construction industry: the effects of trust and dependence. *Journal of Business & Industrial Marketing*, *27*(1), pp.3-15.

Johnston, D.A., McCutcheon, D.M., Stuart, F.I. and Kerwood, H., 2004. Effects of supplier trust on performance of cooperative supplier relationships. *Journal of operations Management*, *22*(1), pp.23-38.

Jones, T.C. and Riley, D.W., 1985. Using inventory for competitive advantage through supply chain management. *International Journal of Physical Distribution & Materials Management*, *15*(5), pp.16-26.

Juran, J.M., 1988. *Juran on planning for quality*. Collier Macmillan.

Kahraman, C., Cebeci, U. and Ulukan, Z., 2003. Multi-criteria supplier selection using fuzzy AHP. *Logistics information management*, *16(6)*, pp.382-394.

Kalwani, M.U. and Narayandas, N., 1995. Long-term manufacturer-supplier relationships: do they pay off for supplier firms?. *The Journal of marketing*, pp.1-16.

Kaynak, H. and Hartley, J.L., 2008. A replication and extension of quality management into the supply chain. *Journal of Operations Management*, 26(4), pp.468-489.

Kelley, K., Clark, B., Brown, V., & Sitzia, J. 2003. Good practice in the conduct and reporting of survey research. *International Journal for quality in health care*, *15*(3), 261-266

Kraljic, P., 1983. Purchasing must become supply management. *Harvard business review*, *61*(5), pp.109-117.

Krause, D. R., & Ellram, L. M. 1997. Success factors in supplier development. *International Journal of Physical Distribution & Logistics Management*, *27*(1), 39-52.

Kulkarni, S.P. and Heriot, K.C., 1999. Transaction costs and information costs as determinants of the organizational form: A conceptual synthesis. *American Business Review*, 17(2), p.43.

Laaksonen, T., Pajunen, K. and Kulmala, H.I., 2008. Co-evolution of trust and dependence in customer–supplier relationships. *Industrial Marketing Management*, 37(8), pp.910-920.

La Londe, B.J. and Masters, J.M., 1994. Emerging logistics strategies: blueprints for the next century. *International journal of physical distribution & logistics management*, 24(7), pp.35-47.

Lambert, D.M. and Schwieterman, M.A., 2012. Supplier relationship management as a macro business process. *Supply Chain Management: An International Journal*, 17(3), pp.337-352.

Larsson, R. and Finkelstein, S., 1999. Integrating strategic, organizational, and human resource perspectives on mergers and acquisitions: A case survey of synergy realization. *Organization science*, 10(1), pp.1-26.

Lawson, B., Cousins, P.D., Handfield, R.B. and Petersen, K.J., 2009. Strategic purchasing, supply management practices and buyer performance improvement: an empirical study of UK manufacturing organisations. *International Journal of Production Research*, 47(10), pp.2649-2667.

Lazzarini, S.G., Claro, D.P. and Mesquita, L.F., 2008. Buyer–supplier and supplier–supplier alliances: do they reinforce or undermine one another?. *Journal of Management Studies*, *45*(3), pp.561-584.

Lee, D.M., Drake, P.R., 2010. A portfolio model for component purchasing strategy and the case study of two South Korean elevator manufacturers. *Int. J. Prod. Res.* 48 (22), 6651–6682

Lee, H.H. and Li, C., 2018. Supplier quality management: Investment, inspection, and incentives. *Production and Operations Management*, 27(2), pp.304-322.

Liu, Y., Li, Y. and Zhang, L., 2010. Control mechanisms across a buyer–supplier relationship quality matrix. *Journal of Business Research*, *63*(1), pp.3-12.

Lo, V.H. and Yeung, A.H., 2004. Practical framework for strategic alliance in Pearl River Delta manufacturing supply chain: A total quality approach. *International journal of production economics*, 87(3), pp.231-240.

Martynov, A. and Schepker, D.J., 2017. Risk Preferences and Asset Ownership: Integrating Prospect Theory and Transaction Cost Economics. *Managerial and Decision Economics*, 38(2), pp.125-143.

Mayer, R.C., Davis, J.H. and Schoorman, F.D., 1995. An integrative model of organizational trust. *Academy of management review*, *20(3)*, pp.709-734.

Mentzer, J.T., DeWitt, W., Keebler, J.S., Min, S., Nix, N.W., Smith, C.D. and Zacharia, Z.G., 2001. Defining supply chain management. *Journal of Business logistics*, 22(2), pp.1-25.

Mitchell, V., 1996. Assessing the reliability and validity of questionnaires: an empirical example. *Journal of Applied Management Studies*, 5, pp.199-208.

Moeller, S., Fassnacht, M. and Klose, S., 2006. A framework for supplier relationship management (SRM). *Journal of Business-to-Business Marketing*, 13(4), pp.69-94.

Mohr, J. and Spekman, R., 1994. Characteristics of partnership success: partnership attributes, communication behavior, and conflict resolution techniques. *Strategic management journal*, 15(2), pp.135-152.

Monczka, R.M., Callahan, T.J. and Nichols, E.L., 1995. Predictors of relationships among buying and supplying firms. *International Journal of Physical Distribution & Logistics Management*, 25(10), pp.45-59.

Monczka, R.M., Petersen, K.J., Handfield, R.B. and Ragatz, G.L., 1998. Success factors in strategic supplier alliances: the buying company perspective. *Decision sciences*, *29*(3), pp.553-577.

Monczka, R. M., Trent, R. J., & Callahan, T. J. ,1993. Supply base strategies to maximize supplier performance. *International Journal of Physical Distribution & Logistics Management*, *23*(4), 42-54.

Montgomery, R.T., Ogden, J.A. and Boehmke, B.C., 2017. A quantified Kraljic Portfolio Matrix: Using decision analysis for strategic purchasing. *Journal of Purchasing and Supply Management.*

Mowery, D.C., Oxley, J.E. and Silverman, B.S., 1996. Strategic alliances and interfirm knowledge transfer. *Strategic management journal*, 17(S2), pp.77-91.

Mukherji, A. and Francis, J.D., 2008. Mutual adaptation in buyer–supplier relationships. *Journal of Business Research*, 61(2), pp.154-161.

Nagati, H. and Rebolledo, C., 2013. Supplier development efforts: The suppliers' point of view. *Industrial Marketing Management*, 42(2), pp.180-188.

Narus, J. A., & Anderson, J. C. ,1995. Using teams to manage collaborative relationships in business markets. *Journal of Business-to-Business Marketing*, *2*(3), 17-46.

Nemoto, T. and Beglar, D., 2014. Likert-scale questionnaires.

Nilsson, L., Johnson, M.D. and Gustafsson, A., 2001. The impact of quality practices on customer satisfaction and business results: product versus service organizations. *Journal of Quality Management*, *6*(1), pp.5-27.

Noshad, K. and Awasthi, A., 2015. Supplier quality development: A review of literature and industry practices. *International Journal of Production Research*, 53(2), pp.466-487.

Olsen, R.F. and Ellram, L.M., 1997. Buyer-supplier relationships: alternative research approaches. *European Journal of Purchasing & Supply Management*, 3(4), pp.221-231.

Paulraj, A., Lado, A.A. and Chen, I.J., 2008. Inter-organizational communication as a relational competency: Antecedents and performance outcomes in collaborative buyer–supplier relationships. *Journal of operations management*, 26(1), pp.45-64.

Pearce, R.J., 1997. Toward understanding joint venture performance and survival: A bargaining and influence approach to transaction cost theory. *Academy of Management Review*, 22(1), pp.203-225.

Pfeffer, J. and Gerald, R., 81. Salancik. 1978. The external control of organizations: A resource dependence perspective.

Pfeffer, J. 1987. A resource dependence perspective on interorganizational relations. In M. S. Mizruchi, and M. Schwartz (Eds.), Intercorporate relations: The structural analysis of business: 22-55. Cambridge, UK: Cambridge University Press.

Provan, K.G. and Gassenheimer, J.B., 1994. Supplier commitment in relational contract exchanges with buyers: A study of interorganizational dependence and exercised power. *Journal of Management Studies*, 31(1), pp.55-68.

Rao Tummala, V.M. and Tang, C.L., 1996. Strategic quality management, Malcolm Baldrige and European quality awards and ISO 9000 certification: Core concepts and comparative analysis. *International Journal of Quality & Reliability Management*, 13(4), pp.8-38.

Rattray, J., & Jones, M. C. ,2007. Essential elements of questionnaire design and development. *Journal of clinical nursing*, 16(2), 234-243.

Rindfleisch, A. and Heide, J.B., 1997. Transaction cost analysis: Past, present, and future applications. *the Journal of Marketing*, pp.30-54.

Robson, C., 2002. Real world research: A resource for social scientists and practitioner-researchers.

Ross Brennan, D., Turnbull, P.W. and Wilson, D.T., 2003. Dyadic adaptation in business-to-business markets. *European Journal of Marketing, 37(11/12)*, pp.1636-1665.

Sang Chin, K., Yeung, I.K. Oxley, J.E., 1997. Appropriability hazards and governance in strategic alliances: A transaction cost approach. *The Journal of Law, Economics, and Organization*, 13(2), pp.387-409.

Sarkar, A. and Mohapatra, P.K., 2006. Evaluation of supplier capability and performance: A method for supply base reduction. *Journal of Purchasing and Supply Management*, 12(3), pp.148-163.

Sarkis, J. and Talluri, S., 2002. A model for strategic supplier selection. *Journal of supply chain management*, 38(4), pp.18-28.

Saunders, M. N., & Lewis, P. ,2012. *Doing research in business & management: An essential guide to planning your project.* Pearson.

Schuh, C., Strohmer, M.F., Easton, S., Hales, M. and Triplat, A., 2014. Supplier relationship management. *In Supplier relationship management* (pp. 7-12). Apress, Berkeley, CA.

Selnes, F. ,1998. Antecedents and consequences of trust and satisfaction in buyer-seller relationships. *European journal of marketing*, *32*(3/4), 305-322.

Singels, J., Ruël, G. and Van De Water, H., 2001. ISO 9000 series-Certification and performance. *International Journal of Quality & Reliability Management*, *18*(1), pp.62-75.

Spekman, R.E., 1988. Strategic supplier selection: Understanding long-term buyer relationships. *Business horizons*, *31*(4), pp.75-81.

Spekman, R.E., Kamauff Jr, J.W. and Myhr, N., 1998. An empirical investigation into supply chain management: a perspective on partnerships. *Supply Chain Management: An International Journal*, *3*(2), pp.53-67.

Spence, L.J., 1999. Does size matter? The state of the art in small business ethics. *Business ethics: a European review*, *8(3)*, pp.163-174.

Stevens, G.C., 1989. Integrating the supply chain. *International Journal of Physical Distribution & Materials Management*, *19*(8), pp.3-8.

Squire, B., Cousins, P. D., & Brown, S. (2009). Cooperation and knowledge transfer within buyer–supplier relationships: the moderating properties of trust, relationship duration and supplier performance. *British Journal of Management*, 20(4), 461-477.

Tadelis, S., 2010. A Tribute to Oliver Williamson: Williamson's Contribution and its Relevance to 21st Century Capitalism. *California Management Review*, 52(2), pp.159-166.

Tanskanen, K., Ahola, T., Aminoff, A., Kaipia, R., Kauppi, K. and Bragge, J., 2014. Managing External Resources: Preliminary Results from a Literature Review. In *Proceedings of IPSERA 2014 Conference, Pretoria, SA.*

Thayer-Hart, N., Dykema, J., Elver, K., Schaeffer, N. C., & Stevenson, J. ,2010. *Survey fundamentals: A guide to designing and implementing surveys*. University of Wisconsin.

Ting, S.C. and Cho, D.I., 2008. An integrated approach for supplier selection and purchasing decisions. *Supply Chain Management: An International Journal*, 13(2), pp.116-127.

Trent, R.J. and Monczka, R.M., 1999. Achieving world-class supplier quality. *Total Quality Management*, 10(6), pp.927-938

Tricker, R.I., 2012. The evolution of corporate governance. *The SAGE handbook of corporate governance*, pp.39-61.

Van Teijlingen, E., Hundley, V. ,2001. The importance of pilot studies. Social Research Update, 35.

Vos, F.G., Schiele, H. and Hüttinger, L., 2016. Supplier satisfaction: Explanation and out-of-sample prediction. *Journal of business research*, 69(10), pp.4613-4623.

Walgenbach, P., 2001. The production of distrust by means of producing trust. *Organization Studies*, 22(4), pp.693-714.

Waller, B. ,2004. Market responsive manufacturing for the automotive supply chain. *Journal of Manufacturing Technology Management*, 15(1), 10-19.

Wang, W., 2004. *Management of Buyer-Supplier Relationships in the Supply Chain-Case studies of Auto&Telem supply chains* (Doctoral dissertation, KTH Royal Institute of Technology).

Weckenmann, A., Akkasoglu, G. and Werner, T., 2015. Quality management–history and trends. *The TQM Journal*, 27(3), pp.281-293.

Williamson, O.E., 1975. Markets and hierarchies. *New York*, *2630*.

Williamson, O.E., 1979. Transaction-cost economics: the governance of contractual relations. *The journal of Law and Economics*, 22(2), pp.233-261.

Williamson, O.E., 1981. The economics of organization: The transaction cost approach. *American journal of sociology*, 87(3), pp.548-577.

Williamson, O.E., 2008. Outsourcing: Transaction cost economics and supply chain management. *Journal of supply chain management*, 44(2), pp.5-16.

Appendix A

Questionnaire

Welcome to our master thesis survey!
We are David and Felix, two International Strategic Management students from Lund University.

This survey aims to measure the importance of different variables in buyer-supplier relationships. We would like to have your opinion (from the company's perspective) about the relationship with your customer Inwido. The purpose is to identify critical variables for a successful strategic supplier relationship.
By answering this questionnaire, you contribute to the development of Inwido's supplier management processes. The findings are beneficial for you as they will strengthen your relationship with Inwido and enhance the potential for a successful collaboration.

This survey should take about 5 - 10 minutes. Be assured that all answers you provide are kept strictly confidential and are completely anonymised by us. In other words, your personal answers are not published anywhere. Furthermore, Inwido does not have access to the data you provide and will only receive the general results through the analysis made us.

Thank you for your time and effort! We very much value and appreciate your opinion!

First, some introductory questions are asked to increase the validity and reliability of this questionnaire.

1. Please select the Business Area(s) of Inwido you supply to.

- [ ] Denmark
- [ ] Sweden
- [ ] Norway
- [ ] Finland
- [ ] Poland
- [ ] UK
- [ ] Other (please specify)

2. What type of supplier are you?

- [ ] Direct Material Supplier
- [ ] Indirect Material Supplier
- [ ] Service Supplier

3. Select the material/service categories you provide for Inwido.

- [ ] Aluminium
- [ ] Finished Goods
- [ ] Glass
- [ ] Hinges & Fittings
- [ ] Installation
- [ ] Packaging Material
- [ ] Plastics
- [ ] Sealing Strips
- [ ] Semi-finished Goods
- [ ] Surface treatment: Aluminium

- [ ] IT
- [ ] Machinery
- [ ] Mountings
- [ ] Other direct material
- [ ] Surface treatment: Wood
- [ ] Transports
- [ ] Wood & Components
- [ ] Other Indirect Material

4. You are a certified to ISO 9001.

- ( ) Yes
- ( ) No

5. Estimate how long have you been working with Inwido.

- ( ) 0-1 years
- ( ) 2-5 years
- ( ) 6-10 years
- ( ) 10+ years

6. Please indicate the size of your company.

- ( ) Small - Less than € 10 million annual revenues
- ( ) Medium - Between € 10-100 million annual revenues
- ( ) Large - More than € 100 million annual revenues

7. State your current role within your organisation.

The following questions form the main part of the questionnaire and examine the variables that are critical to the buyer-supplier relationship. The questions can be answered on a

measurement scale from 1 to 7, where 1 implicates low and 7 is high. Additionally, a text box is provided where it is possible to state a reason for not answering a certain question.

8. You continuously evaluate and improve the products/services you supply to Inwido.

Strongly Disagree			Neither agree nor disagree			Strongly Agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

9. You continously evaluate and improve your business processes to meet the requirements of Inwido.

Strongly Disagree			Neither agree nor disagree			Strongly Agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

10. You are confronted with unforeseen issues within your industry.

Not At All			Sometimes			All The Time
1	2	3	4	5	6	7
○	○	○	○	○	○	○

11. Inwido is involved in your product/service development.

Strongly Disagree			Neither agree nor disagree			Strongly Agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

12. Inwido is involved in your forecasting and delivery planning.

Strongly Disagree			Neither agree nor disagree			Strongly Agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

13. Based on your past and present experience, how would you assess the level of trust your firm has in its working relationship with Inwido?

None						Very High
1	2	3	4	5	6	7
○	○	○	○	○	○	○

14. You feel that Inwido is a reliable business partner.

Strongly Disagree			Neither agree nor disagree			Strongly Agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

15. You have made significant investments to fulfill the requirements of Inwido

Strongly Disagree			Neither agree nor disagree			Strongly Agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

16. You receive sufficient information about your performance.

Strongly Disagree			Neither agree nor disagree			Strongly Agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

17. Both you and Inwido keep each other informed about events or changes that may affect the other party.

Strongly Disagree			Neither agree nor disagree			Strongly Agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

18. It would be difficult for you to replace Inwido as a customer.

Strongly Disagree			Neither agree nor disagree			Strongly Agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

19. You see this relationship as a long-term alliance.

Strongly Disagree			Neither agree nor disagree			Strongly Agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

20. The relationship that you have with Inwido is something you are very committed to

Strongly Disagree			Neither agree nor disagree			Strongly Agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

21. You are satisfied with the working relationship between your firm and Inwido.

Strongly Disagree			Neither agree nor disagree			Strongly Agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

(T) 22. You are satisfied with the interaction with Inwido.

Strongly Disagree			Neither agree nor disagree			Strongly Agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

(T) 23. You cooperate extensively with Inwido with respect to forecasting and delivery planning.

Strongly Disagree			Neither agree nor disagree			Strongly Agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

24. You cooperate extensively with Inwido with respect to quality practices.

Strongly Disagree			Neither agree nor disagree			Strongly Agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

25. The success of buyer-supplier relationships depends on several variables, whichh can be found below. Please rank them according to what variables you perceive to be most essential in your relationship with Inwido. (1 is most important and 7 is least important)

Trust

Satisfaction

Interdependence

Adaptation

Commitment

Cooperation

Communication

To conclude, we have three final questions that we ask to create an understanding of the current willingness of suppliers to engage further into a strategic relationship with Inwido. We define strategic buyer-supplier relationships as *collaborative-oriented relationships with the purpose of co-creating value to achieve a competitive advantage.*

26. You see yourself as a strategic partner of Inwido.

Strongly Disagree			Neither agree nor disagree			Strongly Agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

27. Could an increased collaboration be an incentive for you as a supplier?

Strongly Disagree			Neither agree nor disagree			Strongly Agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

28. You are motivated to create or sustain a strategic relationship with Inwido.

Strongly Disagree			Neither agree nor disagree			Strongly Agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

Appendix B

Introduction E-Mail

Dear Supplier of Inwido,

We are David and Felix, two International Strategic Management students from Lund University, Sweden. We are currently in the process of collecting empirical data for our thesis, which we are writing in cooperation with your customer Inwido. As previously announced by Inwido, we hereby send you the link to complete the Master Thesis Survey concerning Strategic Supplier Relationships.

LINK TO SURVEY: https://www.surveymonkey.com/r/2MCMQBF

By answering this questionnaire, you contribute to the development of Inwido's supplier management processes. The findings are beneficial for you as they will strengthen your relationship with Inwido and enhance the potential for a successful collaboration.

This survey should take about 5 - 10 minutes. All answers you provide are kept strictly confidential and are completely anonymised by us.

Thank you for your time and effort! We very much value and appreciate your opinion!

Kind regards,

David Erlacher
Felix Simoens

MSc International Strategic Management
Lund University School of Economics and Management
Sweden

Reminder E-Mail

Dear Supplier of Inwido,

this Monday we sent you a survey concerning the buyer-supplier relationship with your customer Inwido.

A number of you already submitted your survey, we thank you for your valuable input and truly appreciate it. Your opinion will contribute to the analysis that will strengthen your relationship with Inwido.

If you have not, we would like to remind you to complete the survey and submit your responses by the ***9th of May.*** Your responses are crucial to illustrate a valid and reliable result. Please find the link to the survey below.

LINK TO SURVEY: https://www.surveymonkey.com/r/2MCMQBF

Thank you for your time and effort! We very much value and appreciate your opinion!

Kind regards,

David Erlacher
Felix Simoens

MSc International Strategic Management
Lund University School of Economics and Management
Sweden

Appendix C

Means - Adaptation

ADA1 ADA2 VAR_ADA * Denmark

Denmark		ADA1	ADA2	VAR_ADA
	Mean	5,7049	5,6774	3,3276
	Variance	1,111	,943	3,557
	Range	5,00	5,00	6,00
	N	61	62	58
	Median	6,0000	6,0000	3,0000
Denmark	Mean	6,2258	5,8667	2,7241
	Variance	,647	,878	2,921
	Range	3,00	3,00	5,00
	N	31	30	29
	Median	6,0000	6,0000	2,0000
Total	Mean	5,8804	5,7391	3,1264
	Variance	1,008	,920	3,391
	Range	5,00	5,00	6,00
	N	92	92	87
	Median	6,0000	6,0000	2,0000

ADA1 ADA2 VAR_ADA * Sweden

Sweden		ADA1	ADA2	VAR_ADA
	Mean	6,1071	5,7931	3,2222
	Variance	,766	1,099	3,487
	Range	3,00	5,00	6,00
	N	28	29	27
	Median	6,0000	6,0000	2,0000
Sweden	Mean	5,7812	5,7143	3,0833
	Variance	1,094	,853	3,400
	Range	5,00	3,00	6,00
	N	64	63	60
	Median	6,0000	6,0000	2,5000
Total	Mean	5,8804	5,7391	3,1264

	Variance	1,008	,920	3,391
	Range	5,00	5,00	6,00
	N	92	92	87
	Median	6,0000	6,0000	2,0000

ADA1 ADA2 VAR_ADA * Norway

Norway		ADA1	ADA2	VAR_ADA
	Mean	5,9315	5,7297	3,2254
	Variance	,981	,940	3,291
	Range	5,00	5,00	6,00
	N	73	74	71
	Median	6,0000	6,0000	3,0000
Norway	Mean	5,6842	5,7778	2,6875
	Variance	1,117	,889	3,829
	Range	3,00	3,00	5,00
	N	19	18	16
	Median	6,0000	6,0000	2,0000
Total	Mean	5,8804	5,7391	3,1264
	Variance	1,008	,920	3,391
	Range	5,00	5,00	6,00
	N	92	92	87
	Median	6,0000	6,0000	2,0000

ADA1 ADA2 VAR_ADA * Finland

Finland		ADA1	ADA2	VAR_ADA
	Mean	5,7917	5,6849	3,1029
	Variance	1,069	,802	3,318
	Range	5,00	3,00	6,00
	N	72	73	68
	Median	6,0000	6,0000	2,0000
Finland	Mean	6,2000	5,9474	3,2105
	Variance	,695	1,386	3,842
	Range	3,00	5,00	6,00
	N	20	19	19
	Median	6,0000	6,0000	3,0000
Total	Mean	5,8804	5,7391	3,1264

	Variance	1,008	,920	3,391
	Range	5,00	5,00	6,00
	N	92	92	87
	Median	6,0000	6,0000	2,0000

ADA1 ADA2 VAR_ADA * Poland

Poland		ADA1	ADA2	VAR_ADA
	Mean	5,8250	5,6875	3,1892
	Variance	1,083	,977	3,635
	Range	5,00	5,00	6,00
	N	80	80	74
	Median	6,0000	6,0000	2,0000
Poland	Mean	6,2500	6,0833	2,7692
	Variance	,386	,447	2,026
	Range	2,00	2,00	5,00
	N	12	12	13
	Median	6,0000	6,0000	3,0000
Total	Mean	5,8804	5,7391	3,1264
	Variance	1,008	,920	3,391
	Range	5,00	5,00	6,00
	N	92	92	87
	Median	6,0000	6,0000	2,0000

ADA1 ADA2 VAR_ADA * UK

UK		ADA1	ADA2	VAR_ADA
	Mean	5,8636	5,6932	3,1667
	Variance	1,039	,905	3,442
	Range	5,00	5,00	6,00
	N	88	88	84
	Median	6,0000	6,0000	2,5000
UK	Mean	6,2500	6,7500	2,0000
	Variance	,250	,250	1,000
	Range	1,00	1,00	2,00
	N	4	4	3
	Median	6,0000	7,0000	2,0000
Total	Mean	5,8804	5,7391	3,1264

	Variance	1,008	,920	3,391
	Range	5,00	5,00	6,00
	N	92	92	87
	Median	6,0000	6,0000	2,0000

ADA1 ADA2 VAR_ADA * Other

Other		ADA1	ADA2	VAR_ADA
	Mean	5,8621	5,7126	3,2073
	Variance	1,027	,928	3,450
	Range	5,00	5,00	6,00
	N	87	87	82
	Median	6,0000	6,0000	3,0000
Estonia	Mean	6,2000	6,2000	1,8000
	Variance	,700	,700	,700
	Range	2,00	2,00	2,00
	N	5	5	5
	Median	6,0000	6,0000	2,0000
Total	Mean	5,8804	5,7391	3,1264
	Variance	1,008	,920	3,391
	Range	5,00	5,00	6,00
	N	92	92	87
	Median	6,0000	6,0000	2,0000

ADA1 ADA2 VAR_ADA * amount_countries

amount_countries		ADA1	ADA2	VAR_ADA
One BA	Mean	5,8226	5,7302	3,4407
	Variance	1,034	,910	3,389
	Range	5,00	5,00	6,00
	N	62	63	59
	Median	6,0000	6,0000	3,0000
Several BA	Mean	6,0000	5,7586	2,4643
	Variance	,966	,975	2,851
	Range	3,00	3,00	5,00
	N	30	29	28

	Median	6,0000	6,0000	2,0000
Total	Mean	5,8804	5,7391	3,1264
	Variance	1,008	,920	3,391
	Range	5,00	5,00	6,00
	N	92	92	87
	Median	6,0000	6,0000	2,0000

ADA1 ADA2 VAR_ADA * direct

direct		ADA1	ADA2	VAR_ADA
Indirect Material Supplier	Mean	5,8125	5,7333	3,1429
	Variance	1,096	,781	3,824
	Range	3,00	3,00	6,00
	N	16	15	14
	Median	6,0000	6,0000	2,5000
Direct Material Supplier	Mean	5,8308	5,7273	3,2222
	Variance	1,018	,909	3,434
	Range	5,00	5,00	6,00
	N	65	66	63
	Median	6,0000	6,0000	3,0000
Service Supplier	Mean	6,2727	5,8182	2,5000
	Variance	,818	1,364	2,722
	Range	3,00	3,00	4,00
	N	11	11	10
	Median	6,0000	6,0000	2,0000
Total	Mean	5,8804	5,7391	3,1264
	Variance	1,008	,920	3,391
	Range	5,00	5,00	6,00
	N	92	92	87
	Median	6,0000	6,0000	2,0000

ADA1 ADA2 VAR_ADA * indirect

indirect		ADA1	ADA2	VAR_ADA
	Mean	5,8636	5,7045	3,1687
	Variance	1,016	,923	3,386

	Range	5,00	5,00	6,00
	N	88	88	83
	Median	6,0000	6,0000	3,0000
Indirect Material Supplier	Mean	6,2500	6,5000	2,2500
	Variance	,917	,333	3,583
	Range	2,00	1,00	4,00
	N	4	4	4
	Median	6,5000	6,5000	1,5000
Total	Mean	5,8804	5,7391	3,1264
	Variance	1,008	,920	3,391
	Range	5,00	5,00	6,00
	N	92	92	87
	Median	6,0000	6,0000	2,0000

ADA1 ADA2 VAR_ADA * service

service		ADA1	ADA2	VAR_ADA
	Mean	5,8193	5,6988	3,1899
	Variance	1,052	,920	3,489
	Range	5,00	5,00	6,00
	N	83	83	79
	Median	6,0000	6,0000	3,0000
Service Supplier	Mean	6,4444	6,1111	2,5000
	Variance	,278	,861	2,286
	Range	1,00	3,00	5,00
	N	9	9	8
	Median	6,0000	6,0000	2,0000
Total	Mean	5,8804	5,7391	3,1264
	Variance	1,008	,920	3,391
	Range	5,00	5,00	6,00
	N	92	92	87
	Median	6,0000	6,0000	2,0000

ADA1 ADA2 VAR_ADA * ISO

ISO	ADA1	ADA2	VAR_ADA

Yes	Mean	5,9815	5,7736	2,9608
	Variance	,886	,986	3,438
	Range	3,00	3,00	6,00
	N	54	53	51
	Median	6,0000	6,0000	2,0000
No	Mean	5,7297	5,7027	3,4118
	Variance	1,203	,881	3,462
	Range	5,00	5,00	6,00
	N	37	37	34
	Median	6,0000	6,0000	3,0000
Total	Mean	5,8791	5,7444	3,1412
	Variance	1,019	,934	3,456
	Range	5,00	5,00	6,00
	N	91	90	85
	Median	6,0000	6,0000	2,0000

ADA1 ADA2 VAR_ADA * time

time		ADA1	ADA2	VAR_ADA
0-1 years	Mean	6,0000	6,2500	2,5000
	Variance	1,333	,917	3,000
	Range	2,00	2,00	4,00
	N	4	4	4
	Median	6,0000	6,5000	2,0000
2-5 years	Mean	5,7143	5,6667	3,3333
	Variance	1,604	,524	4,606
	Range	5,00	2,00	6,00
	N	14	15	12
	Median	6,0000	6,0000	2,5000
6-10 years	Mean	5,9697	5,7813	3,5938
	Variance	1,030	1,015	3,926
	Range	3,00	3,00	6,00
	N	33	32	32
	Median	6,0000	6,0000	3,0000
10+ years	Mean	5,8537	5,6829	2,7436
	Variance	,828	1,022	2,511

	Range	3,00	5,00	6,00
	N	41	41	39
	Median	6,0000	6,0000	2,0000
Total	Mean	5,8804	5,7391	3,1264
	Variance	1,008	,920	3,391
	Range	5,00	5,00	6,00
	N	92	92	87
	Median	6,0000	6,0000	2,0000

ADA1 ADA2 VAR_ADA * size

size		ADA1	ADA2	VAR_ADA
Small - Less than € 10 million annual revenues	Mean	5,5357	5,7143	3,4615
	Variance	1,369	1,026	3,858
	Range	5,00	5,00	6,00
	N	28	28	26
	Median	6,0000	6,0000	3,0000
Medium - Between € 10-100 million annual revenues	Mean	5,9459	5,6316	3,1622
	Variance	,886	,996	3,751
	Range	3,00	3,00	6,00
	N	37	38	37
	Median	6,0000	6,0000	3,0000
Large - More than € 100 million annual revenue	Mean	6,1481	5,9231	2,7083
	Variance	,670	,714	2,303
	Range	3,00	3,00	5,00
	N	27	26	24
	Median	6,0000	6,0000	2,0000
Total	Mean	5,8804	5,7391	3,1264
	Variance	1,008	,920	3,391
	Range	5,00	5,00	6,00
	N	92	92	87
	Median	6,0000	6,0000	2,0000

Means - Commitment

COMI1 COMI2 VAR_COMI * Denmark

Denmark		COMI1	COMI2	VAR_COMI
	Mean	6,0323	6,4355	4,0175
	Variance	1,638	,873	2,875
	Range	5,00	4,00	5,00
	N	62	62	57
	Median	7,0000	7,0000	4,0000
Denmark	Mean	6,4516	6,6452	4,7778
	Variance	,523	,303	3,179
	Range	3,00	2,00	6,00
	N	31	31	27
	Median	7,0000	7,0000	5,0000
Total	Mean	6,1720	6,5054	4,2619
	Variance	1,296	,687	3,063
	Range	5,00	4,00	6,00
	N	93	93	84
	Median	7,0000	7,0000	4,0000

COMI1 COMI2 VAR_COMI * Sweden

Sweden		COMI1	COMI2	VAR_COMI
	Mean	6,2069	6,3448	4,5000
	Variance	,741	,734	4,435
	Range	3,00	3,00	6,00
	N	29	29	24
	Median	6,0000	7,0000	5,5000
Sweden	Mean	6,1562	6,5781	4,1667
	Variance	1,563	,660	2,548
	Range	5,00	4,00	6,00
	N	64	64	60
	Median	7,0000	7,0000	4,0000
Total	Mean	6,1720	6,5054	4,2619
	Variance	1,296	,687	3,063
	Range	5,00	4,00	6,00

	N	93	93	84
	Median	7,0000	7,0000	4,0000

COMI1 COMI2 VAR_COMI * Norway

Norway		COMI1	COMI2	VAR_COMI
	Mean	6,2162	6,5270	4,3188
	Variance	1,240	,609	3,132
	Range	5,00	4,00	6,00
	N	74	74	69
	Median	7,0000	7,0000	5,0000
Norway	Mean	6,0000	6,4211	4,0000
	Variance	1,556	1,035	2,857
	Range	3,00	3,00	6,00
	N	19	19	15
	Median	7,0000	7,0000	4,0000
Total	Mean	6,1720	6,5054	4,2619
	Variance	1,296	,687	3,063
	Range	5,00	4,00	6,00
	N	93	93	84
	Median	7,0000	7,0000	4,0000

COMI1 COMI2 VAR_COMI * Finland

Finland		COMI1	COMI2	VAR_COMI
	Mean	6,0959	6,5068	4,2769
	Variance	1,477	,670	2,860
	Range	5,00	4,00	6,00
	N	73	73	65
	Median	7,0000	7,0000	4,0000
Finland	Mean	6,4500	6,5000	4,2105
	Variance	,576	,789	3,953
	Range	2,00	2,00	6,00
	N	20	20	19
	Median	7,0000	7,0000	5,0000
Total	Mean	6,1720	6,5054	4,2619

	Variance	1,296	,687	3,063
	Range	5,00	4,00	6,00
	N	93	93	84
	Median	7,0000	7,0000	4,0000

COMI1 COMI2 VAR_COMI * Poland

Poland		COMI1	COMI2	VAR_COMI
	Mean	6,1875	6,4750	4,3239
	Variance	1,268	,734	3,194
	Range	5,00	4,00	6,00
	N	80	80	71
	Median	7,0000	7,0000	5,0000
Poland	Mean	6,0769	6,6923	3,9231
	Variance	1,577	,397	2,410
	Range	3,00	2,00	5,00
	N	13	13	13
	Median	7,0000	7,0000	4,0000
Total	Mean	6,1720	6,5054	4,2619
	Variance	1,296	,687	3,063
	Range	5,00	4,00	6,00
	N	93	93	84
	Median	7,0000	7,0000	4,0000

COMI1 COMI2 VAR_COMI * UK

UK		COMI1	COMI2	VAR_COMI
	Mean	6,1348	6,4831	4,2593
	Variance	1,323	,707	3,069
	Range	5,00	4,00	6,00
	N	89	89	81
	Median	7,0000	7,0000	4,0000
UK	Mean	7,0000	7,0000	4,3333
	Variance	,000	,000	4,333
	Range	,00	,00	4,00
	N	4	4	3

	Median	7,0000	7,0000	5,0000
Total	Mean	6,1720	6,5054	4,2619
	Variance	1,296	,687	3,063
	Range	5,00	4,00	6,00
	N	93	93	84
	Median	7,0000	7,0000	4,0000

COMI1 COMI2 VAR_COMI * Other

Other		COMI1	COMI2	VAR_COMI
	Mean	6,1477	6,4886	4,3250
	Variance	1,346	,713	3,007
	Range	5,00	4,00	6,00
	N	88	88	80
	Median	7,0000	7,0000	4,5000
Estonia	Mean	6,6000	6,8000	3,0000
	Variance	,300	,200	3,333
	Range	1,00	1,00	4,00
	N	5	5	4
	Median	7,0000	7,0000	3,0000
Total	Mean	6,1720	6,5054	4,2619
	Variance	1,296	,687	3,063
	Range	5,00	4,00	6,00
	N	93	93	84
	Median	7,0000	7,0000	4,0000

COMI1 COMI2 VAR_COMI * amount_countries

amount_countries		COMI1	COMI2	VAR_COMI
One BA	Mean	6,1270	6,4603	4,3684
	Variance	1,371	,736	3,165
	Range	5,00	4,00	6,00
	N	63	63	57
	Median	7,0000	7,0000	5,0000
Several BA	Mean	6,2667	6,6000	4,0370
	Variance	1,168	,593	2,883

	Range	3,00	3,00	6,00
	N	30	30	27
	Median	7,0000	7,0000	4,0000
Total	Mean	6,1720	6,5054	4,2619
	Variance	1,296	,687	3,063
	Range	5,00	4,00	6,00
	N	93	93	84
	Median	7,0000	7,0000	4,0000

COMI1 COMI2 VAR_COMI * direct

direct		COMI1	COMI2	VAR_COMI
Indirect Material Supplier	Mean	5,9375	6,3125	3,7692
	Variance	1,663	,762	2,692
	Range	3,00	2,00	5,00
	N	16	16	13
	Median	6,5000	7,0000	4,0000
Direct Material Supplier	Mean	6,2121	6,5606	4,3607
	Variance	1,216	,650	3,168
	Range	5,00	4,00	6,00
	N	66	66	61
	Median	7,0000	7,0000	5,0000
Service Supplier	Mean	6,2727	6,4545	4,3000
	Variance	1,418	,873	3,122
	Range	3,00	3,00	5,00
	N	11	11	10
	Median	7,0000	7,0000	5,0000
Total	Mean	6,1720	6,5054	4,2619
	Variance	1,296	,687	3,063
	Range	5,00	4,00	6,00
	N	93	93	84
	Median	7,0000	7,0000	4,0000

COMI1 COMI2 VAR_COMI * indirect

indirect	COMI1	COMI2	VAR_COMI

	Mean	6,1798	6,5056	4,2250
	Variance	1,285	,685	3,113
	Range	5,00	4,00	6,00
	N	89	89	80
	Median	7,0000	7,0000	4,0000
Indirect Material Supplier	Mean	6,0000	6,5000	5,0000
	Variance	2,000	1,000	2,000
	Range	3,00	2,00	3,00
	N	4	4	4
	Median	6,5000	7,0000	5,5000
Total	Mean	6,1720	6,5054	4,2619
	Variance	1,296	,687	3,063
	Range	5,00	4,00	6,00
	N	93	93	84
	Median	7,0000	7,0000	4,0000

COMI1 COMI2 VAR_COMI * service

service		COMI1	COMI2	VAR_COMI
	Mean	6,1667	6,5238	4,1447
	Variance	1,273	,710	3,112
	Range	5,00	4,00	6,00
	N	84	84	76
	Median	7,0000	7,0000	4,0000
Service Supplier	Mean	6,2222	6,3333	5,3750
	Variance	1,694	,500	1,411
	Range	4,00	2,00	3,00
	N	9	9	8
	Median	7,0000	6,0000	6,0000
Total	Mean	6,1720	6,5054	4,2619
	Variance	1,296	,687	3,063
	Range	5,00	4,00	6,00
	N	93	93	84
	Median	7,0000	7,0000	4,0000

COMI1 COMI2 VAR_COMI * ISO

ISO		COMI1	COMI2	VAR_COMI
Yes	Mean	6,2963	6,6667	4,3333
	Variance	1,043	,377	2,627
	Range	3,00	2,00	6,00
	N	54	54	51
	Median	7,0000	7,0000	4,0000
No	Mean	6,0270	6,2703	4,3226
	Variance	1,583	1,092	3,559
	Range	5,00	4,00	6,00
	N	37	37	31
	Median	6,0000	7,0000	5,0000
Total	Mean	6,1868	6,5055	4,3293
	Variance	1,265	,697	2,940
	Range	5,00	4,00	6,00
	N	91	91	82
	Median	7,0000	7,0000	4,5000

COMI1 COMI2 VAR_COMI * time

time		COMI1	COMI2	VAR_COMI
0-1 years	Mean	6,2500	6,7500	5,5000
	Variance	,917	,250	1,000
	Range	2,00	1,00	2,00
	N	4	4	4
	Median	6,5000	7,0000	6,0000
2-5 years	Mean	6,2667	6,5333	3,8182
	Variance	2,067	1,124	1,764
	Range	5,00	4,00	4,00
	N	15	15	11
	Median	7,0000	7,0000	4,0000
6-10 years	Mean	6,1818	6,4848	3,9677
	Variance	1,278	,633	3,166
	Range	3,00	3,00	6,00
	N	33	33	31
	Median	7,0000	7,0000	4,0000

10+ years	Mean	6,1220	6,4878	4,5000
	Variance	1,160	,656	3,392
	Range	4,00	3,00	6,00
	N	41	41	38
	Median	6,0000	7,0000	5,0000
Total	Mean	6,1720	6,5054	4,2619
	Variance	1,296	,687	3,063
	Range	5,00	4,00	6,00
	N	93	93	84
	Median	7,0000	7,0000	4,0000

COMI1 COMI2 VAR_COMI * size

size		COMI1	COMI2	VAR_COMI
Small - Less than € 10 million annual revenues	Mean	5,9643	6,1786	3,9583
	Variance	1,665	1,337	3,868
	Range	5,00	4,00	5,00
	N	28	28	24
	Median	6,0000	7,0000	4,0000
Medium - Between € 10-100 million annual revenues	Mean	6,2368	6,5526	4,5676
	Variance	1,159	,416	2,474
	Range	4,00	2,00	5,00
	N	38	38	37
	Median	7,0000	7,0000	5,0000
Large - More than € 100 million annual revenue	Mean	6,2963	6,7778	4,0870
	Variance	1,140	,256	3,174
	Range	3,00	2,00	6,00
	N	27	27	23
	Median	7,0000	7,0000	4,0000
Total	Mean	6,1720	6,5054	4,2619
	Variance	1,296	,687	3,063
	Range	5,00	4,00	6,00
	N	93	93	84
	Median	7,0000	7,0000	4,0000

Means - Communication

COM1 COM2 VAR_COM * Denmark

Denmark		COM1	COM2	VAR_COM
	Mean	4,6290	5,3387	4,7333
	Variance	1,713	1,736	2,673
	Range	6,00	5,00	6,00
	N	62	62	60
	Median	5,0000	6,0000	5,0000
Denmark	Mean	4,5161	5,3667	4,5172
	Variance	3,191	1,757	3,544
	Range	6,00	6,00	6,00
	N	31	30	29
	Median	5,0000	6,0000	5,0000
Total	Mean	4,5914	5,3478	4,6629
	Variance	2,179	1,724	2,931
	Range	6,00	6,00	6,00
	N	93	92	89
	Median	5,0000	6,0000	5,0000

COM1 COM2 VAR_COM * Sweden

Sweden		COM1	COM2	VAR_COM
	Mean	4,6552	5,3103	4,6296
	Variance	2,448	2,150	2,704
	Range	6,00	6,00	6,00
	N	29	29	27
	Median	5,0000	5,0000	5,0000
Sweden	Mean	4,5625	5,3651	4,6774
	Variance	2,091	1,558	3,075
	Range	6,00	5,00	6,00
	N	64	63	62
	Median	5,0000	6,0000	5,0000
Total	Mean	4,5914	5,3478	4,6629

	Variance	2,179	1,724	2,931
	Range	6,00	6,00	6,00
	N	93	92	89
	Median	5,0000	6,0000	5,0000

COM1 COM2 VAR_COM * Norway

Norway		COM1	COM2	VAR_COM
	Mean	4,6486	5,4324	4,7917
	Variance	2,204	1,756	2,871
	Range	6,00	6,00	6,00
	N	74	74	72
	Median	5,0000	6,0000	5,0000
Norway	Mean	4,3684	5,0000	4,1176
	Variance	2,135	1,529	2,985
	Range	6,00	5,00	6,00
	N	19	18	17
	Median	4,0000	5,0000	4,0000
Total	Mean	4,5914	5,3478	4,6629
	Variance	2,179	1,724	2,931
	Range	6,00	6,00	6,00
	N	93	92	89
	Median	5,0000	6,0000	5,0000

COM1 COM2 VAR_COM * Finland

Finland		COM1	COM2	VAR_COM
	Mean	4,5479	5,3699	4,6957
	Variance	1,946	1,764	2,921
	Range	6,00	6,00	6,00
	N	73	73	69
	Median	5,0000	6,0000	5,0000
Finland	Mean	4,7500	5,2632	4,5500
	Variance	3,145	1,649	3,103
	Range	6,00	5,00	6,00
	N	20	19	20

	Median	5,5000	6,0000	5,0000
Total	Mean	4,5914	5,3478	4,6629
	Variance	2,179	1,724	2,931
	Range	6,00	6,00	6,00
	N	93	92	89
	Median	5,0000	6,0000	5,0000

COM1 COM2 VAR_COM * Poland

Poland		COM1	COM2	VAR_COM
	Mean	4,6000	5,3500	4,6053
	Variance	2,041	1,851	2,562
	Range	6,00	6,00	6,00
	N	80	80	76
	Median	5,0000	6,0000	5,0000
Poland	Mean	4,5385	5,3333	5,0000
	Variance	3,269	,970	5,333
	Range	6,00	3,00	6,00
	N	13	12	13
	Median	5,0000	5,5000	6,0000
Total	Mean	4,5914	5,3478	4,6629
	Variance	2,179	1,724	2,931
	Range	6,00	6,00	6,00
	N	93	92	89
	Median	5,0000	6,0000	5,0000

COM1 COM2 VAR_COM * UK

UK		COM1	COM2	VAR_COM
	Mean	4,5618	5,3068	4,6471
	Variance	2,181	1,755	2,874
	Range	6,00	6,00	6,00
	N	89	88	85
	Median	5,0000	6,0000	5,0000
UK	Mean	5,2500	6,2500	5,0000
	Variance	2,250	,250	5,333

	Range	3,00	1,00	4,00
	N	4	4	4
	Median	5,0000	6,0000	5,0000
Total	Mean	4,5914	5,3478	4,6629
	Variance	2,179	1,724	2,931
	Range	6,00	6,00	6,00
	N	93	92	89
	Median	5,0000	6,0000	5,0000

COM1 COM2 VAR_COM * Other

Other		COM1	COM2	VAR_COM
	Mean	4,5682	5,2989	4,6471
	Variance	2,225	1,747	2,993
	Range	6,00	6,00	6,00
	N	88	87	85
	Median	5,0000	6,0000	5,0000
Estonia	Mean	5,0000	6,2000	5,0000
	Variance	1,500	,700	2,000
	Range	3,00	2,00	3,00
	N	5	5	4
	Median	5,0000	6,0000	5,5000
Total	Mean	4,5914	5,3478	4,6629
	Variance	2,179	1,724	2,931
	Range	6,00	6,00	6,00
	N	93	92	89
	Median	5,0000	6,0000	5,0000

COM1 COM2 VAR_COM * amount_countries

amount_countries		COM1	COM2	VAR_COM
One BA	Mean	4,5238	5,3651	4,7049
	Variance	2,092	1,719	2,878
	Range	6,00	6,00	6,00
	N	63	63	61
	Median	5,0000	6,0000	5,0000

Several BA	Mean	4,7333	5,3103	4,5714
	Variance	2,409	1,793	3,143
	Range	6,00	5,00	6,00
	N	30	29	28
	Median	5,0000	6,0000	4,0000
Total	Mean	4,5914	5,3478	4,6629
	Variance	2,179	1,724	2,931
	Range	6,00	6,00	6,00
	N	93	92	89
	Median	5,0000	6,0000	5,0000

COM1 COM2 VAR_COM * direct

direct		COM1	COM2	VAR_COM
Indirect Material Supplier	Mean	4,3750	5,4667	4,9286
	Variance	2,250	1,267	2,687
	Range	6,00	3,00	6,00
	N	16	15	14
	Median	4,5000	6,0000	5,0000
Direct Material Supplier	Mean	4,6061	5,2424	4,7188
	Variance	2,304	1,910	2,872
	Range	6,00	6,00	6,00
	N	66	66	64
	Median	5,0000	6,0000	5,0000
Service Supplier	Mean	4,8182	5,8182	4,0000
	Variance	1,564	1,164	3,600
	Range	4,00	3,00	6,00
	N	11	11	11
	Median	5,0000	6,0000	4,0000
Total	Mean	4,5914	5,3478	4,6629
	Variance	2,179	1,724	2,931
	Range	6,00	6,00	6,00
	N	93	92	89
	Median	5,0000	6,0000	5,0000

COM1 COM2 VAR_COM * indirect

indirect		COM1	COM2	VAR_COM
	Mean	4,6292	5,3750	4,6941
	Variance	2,191	1,754	3,048
	Range	6,00	6,00	6,00
	N	89	88	85
	Median	5,0000	6,0000	5,0000
Indirect Material Supplier	Mean	3,7500	4,7500	4,0000
	Variance	1,583	,917	,000
	Range	3,00	2,00	,00
	N	4	4	4
	Median	4,0000	4,5000	4,0000
Total	Mean	4,5914	5,3478	4,6629
	Variance	2,179	1,724	2,931
	Range	6,00	6,00	6,00
	N	93	92	89
	Median	5,0000	6,0000	5,0000

COM1 COM2 VAR_COM * service

service		COM1	COM2	VAR_COM
	Mean	4,6310	5,3253	4,6750
	Variance	2,091	1,734	2,982
	Range	6,00	6,00	6,00
	N	84	83	80
	Median	5,0000	6,0000	5,0000
Service Supplier	Mean	4,2222	5,5556	4,5556
	Variance	3,194	1,778	2,778
	Range	5,00	4,00	6,00
	N	9	9	9
	Median	4,0000	6,0000	5,0000
Total	Mean	4,5914	5,3478	4,6629
	Variance	2,179	1,724	2,931
	Range	6,00	6,00	6,00
	N	93	92	89
	Median	5,0000	6,0000	5,0000

COM1 COM2 VAR_COM * ISO

ISO		COM1	COM2	VAR_COM
Yes	Mean	4,7778	5,4717	4,8491
	Variance	2,101	1,562	2,900
	Range	6,00	5,00	6,00
	N	54	53	53
	Median	5,0000	6,0000	5,0000
No	Mean	4,2973	5,1622	4,2941
	Variance	2,326	2,029	2,881
	Range	6,00	6,00	6,00
	N	37	37	34
	Median	5,0000	6,0000	4,0000
Total	Mean	4,5824	5,3444	4,6322
	Variance	2,224	1,756	2,933
	Range	6,00	6,00	6,00
	N	91	90	87
	Median	5,0000	6,0000	5,0000

COM1 COM2 VAR_COM * time

time		COM1	COM2	VAR_COM
0-1 years	Mean	4,5000	5,7500	6,0000
	Variance	1,000	,917	2,000
	Range	2,00	2,00	3,00
	N	4	4	4
	Median	4,0000	5,5000	6,5000
2-5 years	Mean	4,4000	5,4667	4,6000
	Variance	2,400	2,552	4,543
	Range	6,00	6,00	6,00
	N	15	15	15
	Median	5,0000	6,0000	6,0000
6-10 years	Mean	4,6061	5,3437	4,5806
	Variance	1,996	1,588	2,452
	Range	6,00	5,00	5,00

	N	33	32	31
	Median	5,0000	6,0000	4,0000
10+ years	Mean	4,6585	5,2683	4,6154
	Variance	2,480	1,701	2,822
	Range	6,00	5,00	6,00
	N	41	41	39
	Median	5,0000	6,0000	5,0000
Total	Mean	4,5914	5,3478	4,6629
	Variance	2,179	1,724	2,931
	Range	6,00	6,00	6,00
	N	93	92	89
	Median	5,0000	6,0000	5,0000

COM1 COM2 VAR_COM * size

size		COM1	COM2	VAR_COM
Small - Less than € 10 million annual revenues	Mean	4,3214	5,2500	4,8846
	Variance	2,522	2,565	2,346
	Range	6,00	6,00	5,00
	N	28	28	26
	Median	4,5000	6,0000	5,0000
Medium - Between € 10-100 million annual revenues	Mean	4,6053	5,2632	4,2368
	Variance	1,651	1,605	3,213
	Range	5,00	5,00	6,00
	N	38	38	38
	Median	5,0000	5,5000	4,0000
Large - More than € 100 million annual revenue	Mean	4,8519	5,5769	5,0800
	Variance	2,593	1,054	2,827
	Range	6,00	3,00	6,00
	N	27	26	25
	Median	5,0000	6,0000	6,0000
Total	Mean	4,5914	5,3478	4,6629
	Variance	2,179	1,724	2,931
	Range	6,00	6,00	6,00
	N	93	92	89
	Median	5,0000	6,0000	5,0000

Means - Cooperation

COO1 COO3 VAR_COO * Denmark

Denmark		COO1	COO3	VAR_COO
	Mean	4,1613	5,5902	4,4561
	Variance	2,760	1,479	3,431
	Range	6,00	6,00	6,00
	N	62	61	57
	Median	4,0000	6,0000	5,0000
Denmark	Mean	4,7097	6,0645	5,1724
	Variance	3,346	1,729	2,862
	Range	6,00	6,00	6,00
	N	31	31	29
	Median	5,0000	6,0000	5,0000
Total	Mean	4,3441	5,7500	4,6977
	Variance	2,989	1,596	3,319
	Range	6,00	6,00	6,00
	N	93	92	86
	Median	4,0000	6,0000	5,0000

COO1 COO3 VAR_COO * Sweden

Sweden		COO1	COO3	VAR_COO
	Mean	4,3448	5,8276	4,5833
	Variance	2,305	1,219	3,384
	Range	6,00	4,00	6,00
	N	29	29	24
	Median	4,0000	6,0000	5,0000
Sweden	Mean	4,3438	5,7143	4,7419
	Variance	3,340	1,788	3,342
	Range	6,00	6,00	6,00
	N	64	63	62
	Median	4,5000	6,0000	5,0000
Total	Mean	4,3441	5,7500	4,6977

	Variance	2,989	1,596	3,319
	Range	6,00	6,00	6,00
	N	93	92	86
	Median	4,0000	6,0000	5,0000

COO1 COO3 VAR_COO * Norway

Norway		COO1	COO3	VAR_COO
	Mean	4,4189	5,8493	4,5072
	Variance	2,685	1,158	3,342
	Range	6,00	4,00	6,00
	N	74	73	69
	Median	4,0000	6,0000	5,0000
Norway	Mean	4,0526	5,3684	5,4706
	Variance	4,275	3,246	2,640
	Range	6,00	6,00	5,00
	N	19	19	17
	Median	4,0000	6,0000	6,0000
Total	Mean	4,3441	5,7500	4,6977
	Variance	2,989	1,596	3,319
	Range	6,00	6,00	6,00
	N	93	92	86
	Median	4,0000	6,0000	5,0000

COO1 COO3 VAR_COO * Finland

Finland		COO1	COO3	VAR_COO
	Mean	4,1644	5,8056	4,5909
	Variance	2,973	1,257	3,261
	Range	6,00	6,00	6,00
	N	73	72	66
	Median	4,0000	6,0000	5,0000
Finland	Mean	5,0000	5,5500	5,0500
	Variance	2,632	2,892	3,524
	Range	6,00	6,00	6,00
	N	20	20	20

	Median	5,0000	6,0000	5,0000
Total	Mean	4,3441	5,7500	4,6977
	Variance	2,989	1,596	3,319
	Range	6,00	6,00	6,00
	N	93	92	86
	Median	4,0000	6,0000	5,0000

COO1 COO3 VAR_COO * Poland

Poland		COO1	COO3	VAR_COO
	Mean	4,3250	5,7342	4,5616
	Variance	2,728	1,454	3,527
	Range	6,00	6,00	6,00
	N	80	79	73
	Median	4,0000	6,0000	5,0000
Poland	Mean	4,4615	5,8462	5,4615
	Variance	4,936	2,641	1,603
	Range	6,00	6,00	4,00
	N	13	13	13
	Median	5,0000	6,0000	6,0000
Total	Mean	4,3441	5,7500	4,6977
	Variance	2,989	1,596	3,319
	Range	6,00	6,00	6,00
	N	93	92	86
	Median	4,0000	6,0000	5,0000

COO1 COO3 VAR_COO * UK

UK		COO1	COO3	VAR_COO
	Mean	4,3258	5,7159	4,6988
	Variance	2,881	1,608	3,433
	Range	6,00	6,00	6,00
	N	89	88	83
	Median	4,0000	6,0000	5,0000
UK	Mean	4,7500	6,5000	4,6667
	Variance	6,917	1,000	,333

	Range	6,00	2,00	1,00
	N	4	4	3
	Median	5,5000	7,0000	5,0000
Total	Mean	4,3441	5,7500	4,6977
	Variance	2,989	1,596	3,319
	Range	6,00	6,00	6,00
	N	93	92	86
	Median	4,0000	6,0000	5,0000

COO1 COO3 VAR_COO * Other

Other		COO1	COO3	VAR_COO
	Mean	4,2841	5,7356	4,7073
	Variance	3,033	1,546	3,419
	Range	6,00	6,00	6,00
	N	88	87	82
	Median	4,0000	6,0000	5,0000
Estonia	Mean	5,4000	6,0000	4,5000
	Variance	1,300	3,000	1,667
	Range	3,00	4,00	3,00
	N	5	5	4
	Median	5,0000	7,0000	4,5000
Total	Mean	4,3441	5,7500	4,6977
	Variance	2,989	1,596	3,319
	Range	6,00	6,00	6,00
	N	93	92	86
	Median	4,0000	6,0000	5,0000

COO1 COO3 VAR_COO * amount_countries

amount_countries		COO1	COO3	VAR_COO
One BA	Mean	4,1746	5,8065	4,4386
	Variance	2,630	1,011	3,679
	Range	6,00	3,00	6,00
	N	63	62	57
	Median	4,0000	6,0000	5,0000

Several BA	Mean	4,7000	5,6333	5,2069
	Variance	3,666	2,861	2,313
	Range	6,00	6,00	5,00
	N	30	30	29
	Median	5,0000	6,0000	5,0000
Total	Mean	4,3441	5,7500	4,6977
	Variance	2,989	1,596	3,319
	Range	6,00	6,00	6,00
	N	93	92	86
	Median	4,0000	6,0000	5,0000

COO1 COO3 VAR_COO * direct

direct		COO1	COO3	VAR_COO
Indirect Material Supplier	Mean	3,3750	5,2500	4,5000
	Variance	2,250	2,200	5,192
	Range	4,00	6,00	6,00
	N	16	16	14
	Median	4,0000	5,0000	5,0000
Direct Material Supplier	Mean	4,7424	5,8923	4,8226
	Variance	2,871	1,441	3,001
	Range	6,00	6,00	6,00
	N	66	65	62
	Median	5,0000	6,0000	5,0000
Service Supplier	Mean	3,3636	5,6364	4,2000
	Variance	1,855	1,455	3,067
	Range	3,00	3,00	6,00
	N	11	11	10
	Median	4,0000	5,0000	4,5000
Total	Mean	4,3441	5,7500	4,6977
	Variance	2,989	1,596	3,319
	Range	6,00	6,00	6,00
	N	93	92	86
	Median	4,0000	6,0000	5,0000

COO1 COO3 VAR_COO * indirect

indirect		COO1	COO3	VAR_COO
	Mean	4,3596	5,7273	4,5976
	Variance	3,097	1,626	3,256
	Range	6,00	6,00	6,00
	N	89	88	82
	Median	4,0000	6,0000	5,0000
Indirect Material Supplier	Mean	4,0000	6,2500	6,7500
	Variance	,667	,917	,250
	Range	2,00	2,00	1,00
	N	4	4	4
	Median	4,0000	6,5000	7,0000
Total	Mean	4,3441	5,7500	4,6977
	Variance	2,989	1,596	3,319
	Range	6,00	6,00	6,00
	N	93	92	86
	Median	4,0000	6,0000	5,0000

COO1 COO3 VAR_COO * service

service		COO1	COO3	VAR_COO
	Mean	4,5238	5,7108	4,5974
	Variance	2,855	1,671	3,402
	Range	6,00	6,00	6,00
	N	84	83	77
	Median	5,0000	6,0000	5,0000
Service Supplier	Mean	2,6667	6,1111	5,5556
	Variance	1,250	,861	2,028
	Range	3,00	2,00	4,00
	N	9	9	9
	Median	2,0000	6,0000	6,0000
Total	Mean	4,3441	5,7500	4,6977
	Variance	2,989	1,596	3,319
	Range	6,00	6,00	6,00
	N	93	92	86
	Median	4,0000	6,0000	5,0000

COO1 COO3 VAR_COO * ISO

ISO		COO1	COO3	VAR_COO
Yes	Mean	4,2778	5,6852	4,8679
	Variance	3,374	2,031	3,001
	Range	6,00	6,00	6,00
	N	54	54	53
	Median	4,0000	6,0000	5,0000
No	Mean	4,4324	5,9167	4,4516
	Variance	2,641	,936	3,989
	Range	6,00	3,00	6,00
	N	37	36	31
	Median	5,0000	6,0000	4,0000
Total	Mean	4,3407	5,7778	4,7143
	Variance	3,049	1,591	3,363
	Range	6,00	6,00	6,00
	N	91	90	84
	Median	4,0000	6,0000	5,0000

COO1 COO3 VAR_COO * time

time		COO1	COO3	VAR_COO
0-1 years	Mean	3,7500	6,0000	4,7500
	Variance	2,917	1,333	2,917
	Range	4,00	2,00	4,00
	N	4	4	4
	Median	3,5000	6,0000	4,5000
2-5 years	Mean	4,2000	5,8571	4,2500
	Variance	3,886	1,516	3,114
	Range	6,00	4,00	6,00
	N	15	14	12
	Median	4,0000	6,0000	4,5000
6-10 years	Mean	4,3333	5,7879	4,5484
	Variance	2,792	1,672	3,789
	Range	6,00	6,00	6,00

	N	33	33	31
	Median	4,0000	6,0000	5,0000
10+ years	Mean	4,4634	5,6585	4,9487
	Variance	3,005	1,680	3,155
	Range	6,00	6,00	6,00
	N	41	41	39
	Median	5,0000	6,0000	5,0000
Total	Mean	4,3441	5,7500	4,6977
	Variance	2,989	1,596	3,319
	Range	6,00	6,00	6,00
	N	93	92	86
	Median	4,0000	6,0000	5,0000

COO1 COO3 VAR_COO * size

size		COO1	COO3	VAR_COO
Small - Less than € 10 million annual revenues	Mean	4,2857	5,5926	4,3333
	Variance	2,138	,943	3,536
	Range	6,00	3,00	6,00
	N	28	27	24
	Median	4,0000	6,0000	4,0000
Medium - Between € 10-100 million annual revenues	Mean	4,5789	6,0526	4,5405
	Variance	2,899	1,673	3,422
	Range	6,00	6,00	6,00
	N	38	38	37
	Median	5,0000	6,0000	5,0000
Large - More than € 100 million annual revenue	Mean	4,0741	5,4815	5,2800
	Variance	4,071	2,028	2,710
	Range	6,00	6,00	6,00
	N	27	27	25
	Median	4,0000	6,0000	5,0000
Total	Mean	4,3441	5,7500	4,6977
	Variance	2,989	1,596	3,319
	Range	6,00	6,00	6,00
	N	93	92	86
	Median	4,0000	6,0000	5,0000

Means - Interdependence

INT1 INT2 VAR_INT * Denmark

Denmark		INT1	INT2	VAR_INT
	Mean	4,5333	4,4000	2,7500
	Variance	1,677	2,041	5,479
	Range	6,00	6,00	6,00
	N	60	60	60
	Median	4,0000	4,0000	1,0000
Denmark	Mean	4,5161	4,4194	2,7143
	Variance	2,258	1,918	3,841
	Range	6,00	6,00	6,00
	N	31	31	28
	Median	4,0000	5,0000	2,0000
Total	Mean	4,5275	4,4066	2,7386
	Variance	1,852	1,977	4,908
	Range	6,00	6,00	6,00
	N	91	91	88
	Median	4,0000	4,0000	2,0000

INT1 INT2 VAR_INT * Sweden

Sweden		INT1	INT2	VAR_INT
	Mean	4,1724	4,3448	3,0000
	Variance	2,362	1,520	4,846
	Range	6,00	6,00	6,00
	N	29	29	27
	Median	4,0000	4,0000	2,0000
Sweden	Mean	4,6935	4,4355	2,6230
	Variance	1,560	2,217	4,972
	Range	6,00	6,00	6,00
	N	62	62	61
	Median	5,0000	5,0000	1,0000
Total	Mean	4,5275	4,4066	2,7386
	Variance	1,852	1,977	4,908

	Range	6,00	6,00	6,00
	N	91	91	88
	Median	4,0000	4,0000	2,0000

INT1 INT2 VAR_INT * Norway

Norway		INT1	INT2	VAR_INT
	Mean	4,5556	4,2500	2,5915
	Variance	1,800	1,965	4,931
	Range	6,00	6,00	6,00
	N	72	72	71
	Median	4,0000	4,0000	1,0000
Norway	Mean	4,4211	5,0000	3,3529
	Variance	2,146	1,667	4,618
	Range	6,00	5,00	6,00
	N	19	19	17
	Median	5,0000	5,0000	2,0000
Total	Mean	4,5275	4,4066	2,7386
	Variance	1,852	1,977	4,908
	Range	6,00	6,00	6,00
	N	91	91	88
	Median	4,0000	4,0000	2,0000

INT1 INT2 VAR_INT * Finland

Finland		INT1	INT2	VAR_INT
	Mean	4,3803	4,2817	2,6522
	Variance	1,896	2,148	5,054
	Range	6,00	6,00	6,00
	N	71	71	69
	Median	4,0000	4,0000	1,0000
Finland	Mean	5,0500	4,8500	3,0526
	Variance	1,418	1,187	4,497
	Range	4,00	4,00	6,00
	N	20	20	19
	Median	5,0000	5,0000	2,0000

Total	Mean	4,5275	4,4066	2,7386
	Variance	1,852	1,977	4,908
	Range	6,00	6,00	6,00
	N	91	91	88
	Median	4,0000	4,0000	2,0000

INT1 INT2 VAR_INT * Poland

Poland		INT1	INT2	VAR_INT
	Mean	4,4557	4,3418	2,8667
	Variance	1,969	1,997	5,252
	Range	6,00	6,00	6,00
	N	79	79	75
	Median	4,0000	4,0000	2,0000
Poland	Mean	5,0000	4,8333	2,0000
	Variance	,909	1,788	2,500
	Range	3,00	4,00	4,00
	N	12	12	13
	Median	5,0000	4,5000	1,0000
Total	Mean	4,5275	4,4066	2,7386
	Variance	1,852	1,977	4,908
	Range	6,00	6,00	6,00
	N	91	91	88
	Median	4,0000	4,0000	2,0000

INT1 INT2 VAR_INT * UK

UK		INT1	INT2	VAR_INT
	Mean	4,5517	4,3678	2,7882
	Variance	1,855	1,956	5,002
	Range	6,00	6,00	6,00
	N	87	87	85
	Median	4,0000	4,0000	2,0000
UK	Mean	4,0000	5,2500	1,3333
	Variance	2,000	2,250	,333
	Range	3,00	3,00	1,00

	N	4	4	3
	Median	4,5000	5,0000	1,0000
Total	Mean	4,5275	4,4066	2,7386
	Variance	1,852	1,977	4,908
	Range	6,00	6,00	6,00
	N	91	91	88
	Median	4,0000	4,0000	2,0000

INT1 INT2 VAR_INT * Other

Other		INT1	INT2	VAR_INT
	Mean	4,5465	4,4070	2,7470
	Variance	1,945	2,056	5,094
	Range	6,00	6,00	6,00
	N	86	86	83
	Median	4,5000	5,0000	2,0000
Estonia	Mean	4,2000	4,4000	2,6000
	Variance	,200	,800	2,300
	Range	1,00	2,00	4,00
	N	5	5	5
	Median	4,0000	4,0000	2,0000
Total	Mean	4,5275	4,4066	2,7386
	Variance	1,852	1,977	4,908
	Range	6,00	6,00	6,00
	N	91	91	88
	Median	4,0000	4,0000	2,0000

INT1 INT2 VAR_INT * amount_countries

amount_countries		INT1	INT2	VAR_INT
One BA	Mean	4,5161	4,3065	2,6333
	Variance	1,795	1,987	5,253
	Range	6,00	6,00	6,00
	N	62	62	60
	Median	4,0000	4,0000	1,0000
Several BA	Mean	4,5517	4,6207	2,9643

	Variance	2,042	1,958	4,258
	Range	6,00	5,00	6,00
	N	29	29	28
	Median	5,0000	5,0000	2,0000
Total	Mean	4,5275	4,4066	2,7386
	Variance	1,852	1,977	4,908
	Range	6,00	6,00	6,00
	N	91	91	88
	Median	4,0000	4,0000	2,0000

INT1 INT2 VAR_INT * direct

direct		INT1	INT2	VAR_INT
Indirect Material Supplier	Mean	4,8125	4,3125	4,1429
	Variance	1,763	2,096	5,824
	Range	4,00	5,00	6,00
	N	16	16	14
	Median	5,0000	4,0000	4,5000
Direct Material Supplier	Mean	4,5313	4,5625	2,3810
	Variance	1,936	1,647	4,433
	Range	6,00	6,00	6,00
	N	64	64	63
	Median	5,0000	5,0000	1,0000
Service Supplier	Mean	4,0909	3,6364	3,0000
	Variance	1,491	3,455	4,000
	Range	5,00	6,00	6,00
	N	11	11	11
	Median	4,0000	4,0000	2,0000
Total	Mean	4,5275	4,4066	2,7386
	Variance	1,852	1,977	4,908
	Range	6,00	6,00	6,00
	N	91	91	88
	Median	4,0000	4,0000	2,0000

INT1 INT2 VAR_INT * indirect

indirect		INT1	INT2	VAR_INT
	Mean	4,5057	4,4253	2,7976
	Variance	1,858	2,038	5,055
	Range	6,00	6,00	6,00
	N	87	87	84
	Median	4,0000	5,0000	2,0000
Indirect Material Supplier	Mean	5,0000	4,0000	1,5000
	Variance	2,000	,667	,333
	Range	3,00	2,00	1,00
	N	4	4	4
	Median	4,5000	4,0000	1,5000
Total	Mean	4,5275	4,4066	2,7386
	Variance	1,852	1,977	4,908
	Range	6,00	6,00	6,00
	N	91	91	88
	Median	4,0000	4,0000	2,0000

INT1 INT2 VAR_INT * service

service		INT1	INT2	VAR_INT
	Mean	4,5488	4,4512	2,7625
	Variance	1,930	1,880	4,918
	Range	6,00	6,00	6,00
	N	82	82	80
	Median	4,0000	4,5000	2,0000
Service Supplier	Mean	4,3333	4,0000	2,5000
	Variance	1,250	3,000	5,429
	Range	3,00	5,00	6,00
	N	9	9	8
	Median	5,0000	4,0000	1,0000
Total	Mean	4,5275	4,4066	2,7386
	Variance	1,852	1,977	4,908
	Range	6,00	6,00	6,00
	N	91	91	88
	Median	4,0000	4,0000	2,0000

INT1 INT2 VAR_INT * ISO

ISO		INT1	INT2	VAR_INT
Yes	Mean	4,4615	4,4038	2,4118
	Variance	1,665	1,932	4,527
	Range	6,00	6,00	6,00
	N	52	52	51
	Median	4,0000	4,0000	1,0000
No	Mean	4,6216	4,4865	3,1429
	Variance	2,242	2,035	4,950
	Range	6,00	6,00	6,00
	N	37	37	35
	Median	5,0000	5,0000	2,0000
Total	Mean	4,5281	4,4382	2,7093
	Variance	1,888	1,954	4,773
	Range	6,00	6,00	6,00
	N	89	89	86
	Median	4,0000	5,0000	2,0000

INT1 INT2 VAR_INT * time

time		INT1	INT2	VAR_INT
0-1 years	Mean	4,2500	2,7500	1,2500
	Variance	,917	2,250	,250
	Range	2,00	3,00	1,00
	N	4	4	4
	Median	4,5000	3,0000	1,0000
2-5 years	Mean	4,2667	4,6000	2,8333
	Variance	2,210	2,971	6,152
	Range	6,00	6,00	6,00
	N	15	15	12
	Median	4,0000	5,0000	1,5000
6-10 years	Mean	4,6875	4,2812	2,9062
	Variance	1,899	1,564	5,249
	Range	5,00	5,00	6,00
	N	32	32	32

	Median	5,0000	4,0000	2,0000
10+ years	Mean	4,5250	4,6000	2,7250
	Variance	1,846	1,733	4,769
	Range	6,00	6,00	6,00
	N	40	40	40
	Median	4,0000	5,0000	2,0000
Total	Mean	4,5275	4,4066	2,7386
	Variance	1,852	1,977	4,908
	Range	6,00	6,00	6,00
	N	91	91	88
	Median	4,0000	4,0000	2,0000

INT1 INT2 VAR_INT * size

size		INT1	INT2	VAR_INT
Small - Less than € 10 million annual revenues	Mean	4,4286	4,2857	3,0000
	Variance	1,587	2,212	4,880
	Range	6,00	5,00	6,00
	N	28	28	26
	Median	4,0000	5,0000	2,0000
Medium - Between € 10-100 million annual revenues	Mean	4,3947	4,6579	2,7368
	Variance	2,083	1,528	5,442
	Range	6,00	5,00	6,00
	N	38	38	38
	Median	4,5000	5,0000	1,5000
Large - More than € 100 million annual revenue	Mean	4,8400	4,1600	2,4583
	Variance	1,807	2,390	4,346
	Range	5,00	6,00	6,00
	N	25	25	24
	Median	5,0000	4,0000	1,5000
Total	Mean	4,5275	4,4066	2,7386
	Variance	1,852	1,977	4,908
	Range	6,00	6,00	6,00
	N	91	91	88
	Median	4,0000	4,0000	2,0000

Means - Satisfaction

SAT1 VAR_SAT * Denmark

Denmark		SAT1	VAR_SAT
	Mean	5,9016	3,8621
	Variance	1,657	3,349
	Range	5,00	6,00
	N	61	58
	Median	6,0000	4,0000
Denmark	Mean	5,9355	3,7857
	Variance	1,329	2,619
	Range	5,00	6,00
	N	31	28
	Median	6,0000	3,5000
Total	Mean	5,9130	3,8372
	Variance	1,531	3,079
	Range	5,00	6,00
	N	92	86
	Median	6,0000	4,0000

SAT1 VAR_SAT * Sweden

Sweden		SAT1	VAR_SAT
	Mean	5,8621	3,8400
	Variance	1,052	2,557
	Range	3,00	6,00
	N	29	25
	Median	6,0000	4,0000
Sweden	Mean	5,9365	3,8361
	Variance	1,770	3,339
	Range	5,00	6,00
	N	63	61
	Median	6,0000	4,0000
Total	Mean	5,9130	3,8372
	Variance	1,531	3,079
	Range	5,00	6,00

	N	92	86
	Median	6,0000	4,0000

SAT1 VAR_SAT * Norway

Norway		SAT1	VAR_SAT
	Mean	5,9730	3,8873
	Variance	1,369	3,159
	Range	5,00	6,00
	N	74	71
	Median	6,0000	4,0000
Norway	Mean	5,6667	3,6000
	Variance	2,235	2,829
	Range	5,00	6,00
	N	18	15
	Median	6,0000	3,0000
Total	Mean	5,9130	3,8372
	Variance	1,531	3,079
	Range	5,00	6,00
	N	92	86
	Median	6,0000	4,0000

SAT1 VAR_SAT * Finland

Finland		SAT1	VAR_SAT
	Mean	6,0139	4,0149
	Variance	1,479	3,015
	Range	5,00	6,00
	N	72	67
	Median	6,0000	4,0000
Finland	Mean	5,5500	3,2105
	Variance	1,629	2,953
	Range	5,00	6,00
	N	20	19
	Median	6,0000	3,0000
Total	Mean	5,9130	3,8372

	Variance	1,531	3,079
	Range	5,00	6,00
	N	92	86
	Median	6,0000	4,0000

SAT1 VAR_SAT * Poland

Poland		SAT1	VAR_SAT
	Mean	5,9367	3,9041
	Variance	1,470	3,116
	Range	5,00	6,00
	N	79	73
	Median	6,0000	4,0000
Poland	Mean	5,7692	3,4615
	Variance	2,026	2,936
	Range	5,00	6,00
	N	13	13
	Median	6,0000	3,0000
Total	Mean	5,9130	3,8372
	Variance	1,531	3,079
	Range	5,00	6,00
	N	92	86
	Median	6,0000	4,0000

SAT1 VAR_SAT * UK

UK		SAT1	VAR_SAT
	Mean	5,8864	3,7711
	Variance	1,573	3,008
	Range	5,00	6,00
	N	88	83
	Median	6,0000	4,0000
UK	Mean	6,5000	5,6667
	Variance	,333	2,333
	Range	1,00	3,00
	N	4	3

	Median	6,5000	6,0000
Total	Mean	5,9130	3,8372
	Variance	1,531	3,079
	Range	5,00	6,00
	N	92	86
	Median	6,0000	4,0000

SAT1 VAR_SAT * Other

Other		SAT1	VAR_SAT
	Mean	5,9080	3,8171
	Variance	1,573	3,164
	Range	5,00	6,00
	N	87	82
	Median	6,0000	4,0000
Estonia	Mean	6,0000	4,2500
	Variance	1,000	1,583
	Range	2,00	3,00
	N	5	4
	Median	6,0000	4,0000
Total	Mean	5,9130	3,8372
	Variance	1,531	3,079
	Range	5,00	6,00
	N	92	86
	Median	6,0000	4,0000

SAT1 VAR_SAT * amount_countries

amount_countries		SAT1	VAR_SAT
One BA	Mean	6,0000	3,8644
	Variance	1,226	3,085
	Range	5,00	6,00
	N	63	59
	Median	6,0000	4,0000
Several BA	Mean	5,7241	3,7778
	Variance	2,207	3,179
	Range	5,00	6,00

	N	29	27
	Median	6,0000	3,0000
Total	Mean	5,9130	3,8372
	Variance	1,531	3,079
	Range	5,00	6,00
	N	92	86
	Median	6,0000	4,0000

SAT1 VAR_SAT * direct

direct		SAT1	VAR_SAT
Indirect Material Supplier	Mean	5,8125	3,4286
	Variance	2,029	4,110
	Range	5,00	6,00
	N	16	14
	Median	6,0000	3,0000
Direct Material Supplier	Mean	5,9385	3,8065
	Variance	1,402	2,814
	Range	5,00	6,00
	N	65	62
	Median	6,0000	4,0000
Service Supplier	Mean	5,9091	4,6000
	Variance	1,891	3,156
	Range	3,00	5,00
	N	11	10
	Median	7,0000	4,0000
Total	Mean	5,9130	3,8372
	Variance	1,531	3,079
	Range	5,00	6,00
	N	92	86
	Median	6,0000	4,0000

SAT1 VAR_SAT * indirect

indirect		SAT1	VAR_SAT
	Mean	5,9432	3,8659
	Variance	1,388	3,155
	Range	5,00	6,00

	N	88	82
	Median	6,0000	4,0000
Indirect Material Supplier	Mean	5,2500	3,2500
	Variance	5,583	1,583
	Range	5,00	3,00
	N	4	4
	Median	6,0000	3,0000
Total	Mean	5,9130	3,8372
	Variance	1,531	3,079
	Range	5,00	6,00
	N	92	86
	Median	6,0000	4,0000

SAT1 VAR_SAT * service

service		SAT1	VAR_SAT
	Mean	5,9157	3,9103
	Variance	1,566	3,070
	Range	5,00	6,00
	N	83	78
	Median	6,0000	4,0000
Service Supplier	Mean	5,8889	3,1250
	Variance	1,361	2,982
	Range	3,00	6,00
	N	9	8
	Median	6,0000	3,0000
Total	Mean	5,9130	3,8372
	Variance	1,531	3,079
	Range	5,00	6,00
	N	92	86
	Median	6,0000	4,0000

SAT1 VAR_SAT * ISO

ISO		SAT1	VAR_SAT
Yes	Mean	6,0377	3,7451
	Variance	1,537	3,234
	Range	5,00	6,00

	N	53	51
	Median	7,0000	4,0000
No	Mean	5,7568	3,9091
	Variance	1,578	2,960
	Range	5,00	6,00
	N	37	33
	Median	6,0000	4,0000
Total	Mean	5,9222	3,8095
	Variance	1,556	3,096
	Range	5,00	6,00
	N	90	84
	Median	6,0000	4,0000

SAT1 VAR_SAT * time

time		SAT1	VAR_SAT
0-1 years	Mean	6,5000	3,0000
	Variance	1,000	,667
	Range	2,00	2,00
	N	4	4
	Median	7,0000	3,0000
2-5 years	Mean	6,1333	4,5000
	Variance	1,838	4,273
	Range	5,00	6,00
	N	15	12
	Median	7,0000	4,0000
6-10 years	Mean	5,9688	4,0625
	Variance	1,515	4,254
	Range	4,00	6,00
	N	32	32
	Median	6,5000	4,0000
10+ years	Mean	5,7317	3,5263
	Variance	1,501	1,824
	Range	5,00	6,00
	N	41	38
	Median	6,0000	3,0000
Total	Mean	5,9130	3,8372
	Variance	1,531	3,079

	Range	5,00	6,00
	N	92	86
	Median	6,0000	4,0000

SAT1 VAR_SAT * size

size		SAT1	VAR_SAT
Small - Less than € 10 million annual revenues	Mean	5,5714	3,7308
	Variance	1,810	3,565
	Range	5,00	6,00
	N	28	26
	Median	6,0000	3,0000
Medium - Between € 10-100 million annual revenues	Mean	6,0541	3,9730
	Variance	1,719	2,805
	Range	5,00	6,00
	N	37	37
	Median	7,0000	4,0000
Large - More than € 100 million annual revenue	Mean	6,0741	3,7391
	Variance	,917	3,202
	Range	3,00	6,00
	N	27	23
	Median	6,0000	3,0000
Total	Mean	5,9130	3,8372
	Variance	1,531	3,079
	Range	5,00	6,00
	N	92	86
	Median	6,0000	4,0000

Means - Trust

TRU1 TRU2 VAR_TRU * Denmark

Denmark		TRU1	TRU2	VAR_TRU
	Mean	5,7903	6,0161	4,8793
	Variance	1,283	1,000	3,582
	Range	4,00	3,00	6,00

	N	62	62	58
	Median	6,0000	6,0000	5,0000
Denmark	Mean	5,9677	6,2258	4,5000
	Variance	1,032	,914	4,333
	Range	4,00	4,00	6,00
	N	31	31	28
	Median	6,0000	6,0000	4,5000
Total	Mean	5,8495	6,0860	4,7558
	Variance	1,194	,971	3,810
	Range	4,00	4,00	6,00
	N	93	93	86
	Median	6,0000	6,0000	5,0000

TRU1 TRU2 VAR_TRU * Sweden

Sweden		TRU1	TRU2	VAR_TRU
	Mean	5,9655	6,1034	4,3077
	Variance	,820	,667	4,542
	Range	3,00	3,00	6,00
	N	29	29	26
	Median	6,0000	6,0000	4,0000
Sweden	Mean	5,7969	6,0781	4,9500
	Variance	1,371	1,121	3,438
	Range	4,00	4,00	6,00
	N	64	64	60
	Median	6,0000	6,0000	5,0000
Total	Mean	5,8495	6,0860	4,7558
	Variance	1,194	,971	3,810
	Range	4,00	4,00	6,00
	N	93	93	86
	Median	6,0000	6,0000	5,0000

TRU1 TRU2 VAR_TRU * Norway

Norway		TRU1	TRU2	VAR_TRU
	Mean	5,8919	6,1351	4,7286
	Variance	1,248	,913	3,766

	Range	4,00	3,00	6,00
	N	74	74	70
	Median	6,0000	6,0000	5,0000
Norway	Mean	5,6842	5,8947	4,8750
	Variance	1,006	1,211	4,250
	Range	4,00	4,00	6,00
	N	19	19	16
	Median	6,0000	6,0000	6,0000
Total	Mean	5,8495	6,0860	4,7558
	Variance	1,194	,971	3,810
	Range	4,00	4,00	6,00
	N	93	93	86
	Median	6,0000	6,0000	5,0000

TRU1 TRU2 VAR_TRU * Finland

Finland		TRU1	TRU2	VAR_TRU
	Mean	5,8904	6,1233	4,7313
	Variance	1,321	1,054	3,927
	Range	4,00	4,00	6,00
	N	73	73	67
	Median	6,0000	6,0000	5,0000
Finland	Mean	5,7000	5,9500	4,8421
	Variance	,747	,682	3,585
	Range	4,00	3,00	6,00
	N	20	20	19
	Median	6,0000	6,0000	5,0000
Total	Mean	5,8495	6,0860	4,7558
	Variance	1,194	,971	3,810
	Range	4,00	4,00	6,00
	N	93	93	86
	Median	6,0000	6,0000	5,0000

TRU1 TRU2 VAR_TRU * Poland

Poland	TRU1	TRU2	VAR_TRU

	Mean	5,8750	6,1250	4,6712
	Variance	1,174	,870	4,085
	Range	4,00	3,00	6,00
	N	80	80	73
	Median	6,0000	6,0000	5,0000
Poland	Mean	5,6923	5,8462	5,2308
	Variance	1,397	1,641	2,192
	Range	4,00	4,00	5,00
	N	13	13	13
	Median	6,0000	6,0000	6,0000
Total	Mean	5,8495	6,0860	4,7558
	Variance	1,194	,971	3,810
	Range	4,00	4,00	6,00
	N	93	93	86
	Median	6,0000	6,0000	5,0000

TRU1 TRU2 VAR_TRU * UK

UK		TRU1	TRU2	VAR_TRU
	Mean	5,8202	6,0562	4,7229
	Variance	1,217	,985	3,861
	Range	4,00	4,00	6,00
	N	89	89	83
	Median	6,0000	6,0000	5,0000
UK	Mean	6,5000	6,7500	5,6667
	Variance	,333	,250	2,333
	Range	1,00	1,00	3,00
	N	4	4	3
	Median	6,5000	7,0000	6,0000
Total	Mean	5,8495	6,0860	4,7558
	Variance	1,194	,971	3,810
	Range	4,00	4,00	6,00
	N	93	93	86
	Median	6,0000	6,0000	5,0000

TRU1 TRU2 VAR_TRU * Other

Other		TRU1	TRU2	VAR_TRU
	Mean	5,8409	6,0795	4,6914
	Variance	1,239	,994	3,616
	Range	4,00	4,00	6,00
	N	88	88	81
	Median	6,0000	6,0000	5,0000
Estonia	Mean	6,0000	6,2000	5,8000
	Variance	,500	,700	7,200
	Range	2,00	2,00	6,00
	N	5	5	5
	Median	6,0000	6,0000	7,0000
Total	Mean	5,8495	6,0860	4,7558
	Variance	1,194	,971	3,810
	Range	4,00	4,00	6,00
	N	93	93	86
	Median	6,0000	6,0000	5,0000

TRU1 TRU2 VAR_TRU * amount_countries

amount_countries		TRU1	TRU2	VAR_TRU
One BA	Mean	5,9206	6,1270	4,6897
	Variance	1,203	,887	3,481
	Range	4,00	3,00	6,00
	N	63	63	58
	Median	6,0000	6,0000	5,0000
Several BA	Mean	5,7000	6,0000	4,8929
	Variance	1,183	1,172	4,618
	Range	4,00	4,00	6,00
	N	30	30	28
	Median	6,0000	6,0000	6,0000
Total	Mean	5,8495	6,0860	4,7558
	Variance	1,194	,971	3,810
	Range	4,00	4,00	6,00
	N	93	93	86
	Median	6,0000	6,0000	5,0000

TRU1 TRU2 VAR_TRU * direct

direct		TRU1	TRU2	VAR_TRU
Indirect Material Supplier	Mean	5,7500	5,8125	4,4286
	Variance	1,133	1,363	3,341
	Range	4,00	4,00	6,00
	N	16	16	14
	Median	6,0000	6,0000	4,5000
Direct Material Supplier	Mean	5,8636	6,1061	4,6613
	Variance	1,258	,896	3,965
	Range	4,00	3,00	6,00
	N	66	66	62
	Median	6,0000	6,0000	5,0000
Service Supplier	Mean	5,9091	6,3636	5,8000
	Variance	1,091	,855	2,844
	Range	3,00	2,00	5,00
	N	11	11	10
	Median	6,0000	7,0000	6,5000
Total	Mean	5,8495	6,0860	4,7558
	Variance	1,194	,971	3,810
	Range	4,00	4,00	6,00
	N	93	93	86
	Median	6,0000	6,0000	5,0000

TRU1 TRU2 VAR_TRU * indirect

indirect		TRU1	TRU2	VAR_TRU
	Mean	5,8764	6,1236	4,7317
	Variance	1,155	,905	3,878
	Range	4,00	3,00	6,00
	N	89	89	82
	Median	6,0000	6,0000	5,0000
Indirect Material Supplier	Mean	5,2500	5,2500	5,2500
	Variance	2,250	2,250	2,917
	Range	3,00	3,00	4,00

	N	4	4	4
	Median	6,0000	6,0000	5,5000
Total	Mean	5,8495	6,0860	4,7558
	Variance	1,194	,971	3,810
	Range	4,00	4,00	6,00
	N	93	93	86
	Median	6,0000	6,0000	5,0000

TRU1 TRU2 VAR_TRU * service

service		TRU1	TRU2	VAR_TRU
	Mean	5,9048	6,1548	4,7564
	Variance	1,196	,952	3,849
	Range	4,00	4,00	6,00
	N	84	84	78
	Median	6,0000	6,0000	5,0000
Service Supplier	Mean	5,3333	5,4444	4,7500
	Variance	1,000	,778	3,929
	Range	3,00	3,00	5,00
	N	9	9	8
	Median	5,0000	5,0000	5,0000
Total	Mean	5,8495	6,0860	4,7558
	Variance	1,194	,971	3,810
	Range	4,00	4,00	6,00
	N	93	93	86
	Median	6,0000	6,0000	5,0000

TRU1 TRU2 VAR_TRU * ISO

ISO		TRU1	TRU2	VAR_TRU
Yes	Mean	5,8704	6,1667	5,0000
	Variance	1,209	,896	2,960
	Range	4,00	4,00	6,00
	N	54	54	51
	Median	6,0000	6,0000	5,0000
No	Mean	5,8378	5,9459	4,3636

	Variance	1,251	1,108	5,176
	Range	4,00	3,00	6,00
	N	37	37	33
	Median	6,0000	6,0000	4,0000
Total	Mean	5,8571	6,0769	4,7500
	Variance	1,213	,983	3,877
	Range	4,00	4,00	6,00
	N	91	91	84
	Median	6,0000	6,0000	5,0000

TRU1 TRU2 VAR_TRU * time

time		TRU1	TRU2	VAR_TRU
0-1 years	Mean	5,5000	5,7500	5,0000
	Variance	1,000	,917	2,667
	Range	2,00	2,00	4,00
	N	4	4	4
	Median	6,0000	5,5000	5,0000
2-5 years	Mean	5,8667	6,3333	5,1818
	Variance	1,552	,952	2,964
	Range	4,00	3,00	5,00
	N	15	15	11
	Median	6,0000	7,0000	6,0000
6-10 years	Mean	6,0303	6,1212	4,3125
	Variance	,843	,985	3,706
	Range	3,00	3,00	6,00
	N	33	33	32
	Median	6,0000	6,0000	4,0000
10+ years	Mean	5,7317	6,0000	4,9744
	Variance	1,401	1,000	4,236
	Range	4,00	4,00	6,00
	N	41	41	39
	Median	6,0000	6,0000	6,0000
Total	Mean	5,8495	6,0860	4,7558
	Variance	1,194	,971	3,810
	Range	4,00	4,00	6,00
	N	93	93	86

Median	6,0000	6,0000	5,0000

TRU1 TRU2 VAR_TRU * size

size		TRU1	TRU2	VAR_TRU
Small - Less than € 10 million annual revenues	Mean	5,6429	5,7500	4,8400
	Variance	1,497	1,083	3,807
	Range	4,00	3,00	6,00
	N	28	28	25
	Median	6,0000	6,0000	5,0000
Medium - Between € 10-100 million annual revenues	Mean	5,9474	6,1579	4,6757
	Variance	1,186	,947	4,170
	Range	4,00	4,00	6,00
	N	38	38	37
	Median	6,0000	6,0000	4,0000
Large - More than € 100 million annual revenue	Mean	5,9259	6,3333	4,7917
	Variance	,917	,769	3,563
	Range	3,00	3,00	6,00
	N	27	27	24
	Median	6,0000	7,0000	5,0000
Total	Mean	5,8495	6,0860	4,7558
	Variance	1,194	,971	3,810
	Range	4,00	4,00	6,00

Appendix D

Reliability - Adaptation

Case Processing Summary

		N	%
Cases	Valid	91	97,8
	Excluded[a]	2	2,2
	Total	93	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,712	,712	2

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	5,808	5,747	5,868	,121	1,021	,007	2
Item Variances	,964	,924	1,005	,080	1,087	,003	2

Reliability - Commitment

Case Processing Summary

		N	%
Cases	Valid	93	100,0
	Excluded[a]	0	,0
	Total	93	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,785	,808	2

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	6,339	6,172	6,505	,333	1,054	,056	2
Item Variances	,992	,687	1,296	,609	1,885	,185	2

Reliability - Communication

Case Processing Summary

		N	%
Cases	Valid	92	98,9
	Excluded[a]	1	1,1
	Total	93	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,706	,707	2

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	4,989	4,630	5,348	,717	1,155	,257	2
Item Variances	1,892	1,724	2,060	,336	1,195	,056	2

Reliability – Cooperation

Case Processing Summary

		N	%
Cases	Valid	92	98,9
	Excluded[a]	1	1,1
	Total	93	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,475	,491	2

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	5,065	4,380	5,750	1,370	1,313	,938	2
Item Variances	2,247	1,596	2,898	1,301	1,815	,847	2

Reliability- Interdependence

Case Processing Summary

		N	%
Cases	Valid	91	97,8
	Excluded[a]	2	2,2
	Total	93	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,373	,373	2

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	4,467	4,407	4,527	,121	1,027	,007	2
Item Variances	1,915	1,852	1,977	,125	1,068	,008	2

Reliability – Trust

Case Processing Summary

		N	%
Cases	Valid	93	100,0
	Excluded[a]	0	,0
	Total	93	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,867	,870	2

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	5,968	5,849	6,086	,237	1,040	,028	2
Item Variances	1,083	,971	1,194	,224	1,230	,025	2

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Appendix E

Length of Working Relationship

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
ADA1	Between Groups	,514	3	,171	,165	,919
	Within Groups	91,171	88	1,036		
	Total	91,685	91			
ADA2	Between Groups	1,157	3	,386	,411	,746
	Within Groups	82,583	88	,938		
	Total	83,739	91			
COMI1	Between Groups	,239	3	,080	,060	,981
	Within Groups	119,008	89	1,337		
	Total	119,247	92			
COMI2	Between Groups	,286	3	,095	,135	,939
	Within Groups	62,962	89	,707		
	Total	63,247	92			
COM1	Between Groups	1,007	3	,336	,150	,930
	Within Groups	199,466	89	2,241		
	Total	200,473	92			
COM2	Between Groups	2,406	3	,802	,457	,713
	Within Groups	154,463	88	1,755		
	Total	156,870	91			
COO1	Between Groups	3,243	3	1,081	,354	,786

	Within Groups	271,746	89	3,053		
	Total	274,989	92			
COO2	Between Groups	1,390	3	,463	,283	,837
	Within Groups	143,860	88	1,635		
	Total	145,250	91			
INT1	Between Groups	1,887	3	,629	,332	,802
	Within Groups	164,794	87	1,894		
	Total	166,681	90			
INT2	Between Groups	14,139	3	4,713	2,503	,065
	Within Groups	163,817	87	1,883		
	Total	177,956	90			
SAT1	Between Groups	5,796	3	1,932	1,273	,289
	Within Groups	133,509	88	1,517		
	Total	139,304	91			
TRU1	Between Groups	2,432	3	,811	,672	,572
	Within Groups	107,460	89	1,207		
	Total	109,892	92			
TRU2	Between Groups	2,601	3	,867	,890	,450
	Within Groups	86,711	89	,974		
	Total	89,312	92			

One or Several BAs

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
ADA1	Between Groups	,307	1	,307	,302	,584
	Within Groups	91,378	90	1,015		
	Total	91,685	91			
ADA2	Between Groups	,025	1	,025	,027	,871
	Within Groups	83,714	90	,930		
	Total	83,739	91			
COMI1	Between Groups	,203	1	,203	,155	,695
	Within Groups	119,045	91	1,308		
	Total	119,247	92			
COMI2	Between Groups	,275	1	,275	,398	,530
	Within Groups	62,972	91	,692		
	Total	63,247	92			

COM1	Between Groups	,407	1	,407	,185	,668
	Within Groups	200,066	91	2,199		
	Total	200,473	92			
COM2	Between Groups	,155	1	,155	,089	,766
	Within Groups	156,714	90	1,741		
	Total	156,870	91			
COO1	Between Groups	6,087	1	6,087	2,060	,155
	Within Groups	268,902	91	2,955		
	Total	274,989	92			
COO2	Between Groups	,381	1	,381	,237	,628
	Within Groups	144,869	90	1,610		
	Total	145,250	91			
INT1	Between Groups	,257	1	,257	,137	,712
	Within Groups	166,425	89	1,870		
	Total	166,681	90			
INT2	Between Groups	3,829	1	3,829	1,957	,165
	Within Groups	174,127	89	1,956		
	Total	177,956	90			
SAT1	Between Groups	2,213	1	2,213	1,453	,231
	Within Groups	137,092	90	1,523		
	Total	139,304	91			
TRU1	Between Groups	1,076	1	1,076	,900	,345
	Within Groups	108,816	91	1,196		
	Total	109,892	92			
TRU2	Between Groups	,612	1	,612	,628	,430
	Within Groups	88,700	91	,975		
	Total	89,312	92			

Type of Supplier (Service, Direct- Indirect Material Supplier)

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
ADA1	Between Groups	3,795	2	1,897	1,872	,161
	Within Groups	79,045	78	1,013		
	Total	82,840	80			
ADA2	Between Groups	1,018	2	,509	,518	,598
	Within Groups	76,636	78	,983		
	Total	77,654	80			
COMI1	Between Groups	1,705	2	,852	,683	,508
	Within Groups	98,552	79	1,247		
	Total	100,256	81			
COMI2	Between Groups	,147	2	,073	,103	,902
	Within Groups	56,305	79	,713		
	Total	56,451	81			
COM1	Between Groups	4,314	2	2,157	1,016	,367
	Within Groups	167,795	79	2,124		
	Total	172,110	81			
COM2	Between Groups	2,288	2	1,144	,642	,529
	Within Groups	139,070	78	1,783		
	Total	141,358	80			
COO1	Between Groups	31,528	2	15,764	5,795	,004
	Within Groups	214,923	79	2,721		
	Total	246,451	81			
COO2	Between Groups	13,166	2	6,583	4,164	,019
	Within Groups	123,304	78	1,581		
	Total	136,469	80			
INT1	Between Groups	2,911	2	1,456	,763	,470
	Within Groups	146,976	77	1,909		

	Total	149,888	79			
INT2	Between Groups	7,875	2	3,937	1,987	,144
	Within Groups	152,613	77	1,982		
	Total	160,487	79			
SAT1	Between Groups	,052	2	,026	,018	,983
	Within Groups	115,750	78	1,484		
	Total	115,802	80			
TRU1	Between Groups	,001	2	,000	,000	1,000
	Within Groups	96,402	79	1,220		
	Total	96,402	81			
TRU2	Between Groups	,440	2	,220	,247	,782
	Within Groups	70,438	79	,892		
	Total	70,878	81			

ISO 9001 Certification

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
ADA1	Between Groups	1,392	1	1,392	1,372	,245
	Within Groups	90,279	89	1,014		
	Total	91,670	90			
ADA2	Between Groups	,109	1	,109	,116	,734
	Within Groups	83,013	88	,943		
	Total	83,122	89			
COMI1	Between Groups	1,592	1	1,592	1,262	,264
	Within Groups	112,232	89	1,261		
	Total	113,824	90			
COMI2	Between Groups	3,450	1	3,450	5,178	,025
	Within Groups	59,297	89	,666		
	Total	62,747	90			

COM1	Between Groups	5,069	1	5,069	2,313	,132
	Within Groups	195,063	89	2,192		
	Total	200,132	90			
COM2	Between Groups	2,088	1	2,088	1,191	,278
	Within Groups	154,235	88	1,753		
	Total	156,322	89			
COO1	Between Groups	,525	1	,525	,171	,681
	Within Groups	273,914	89	3,078		
	Total	274,440	90			
COO2	Between Groups	1,157	1	1,157	,725	,397
	Within Groups	140,398	88	1,595		
	Total	141,556	89			
INT1	Between Groups	,554	1	,554	,291	,591
	Within Groups	165,626	87	1,904		
	Total	166,180	88			
INT2	Between Groups	,148	1	,148	,075	,785
	Within Groups	171,762	87	1,974		
	Total	171,910	88			
SAT1	Between Groups	1,720	1	1,720	1,107	,296
	Within Groups	136,735	88	1,554		
	Total	138,456	89			
TRU1	Between Groups	,023	1	,023	,019	,891
	Within Groups	109,120	89	1,226		
	Total	109,143	90			
TRU2	Between Groups	1,070	1	1,070	1,089	,299
	Within Groups	87,392	89	,982		
	Total	88,462	90			

Size

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
ADA1	Between Groups	4,625	2	2,312	2,372	,099
	Within Groups	85,793	88	,975		
	Total	90,418	90			
ADA2	Between Groups	,984	2	,492	,524	,594
	Within Groups	82,687	88	,940		
	Total	83,670	90			
COMI1	Between Groups	1,590	2	,795	,605	,548

	Within Groups	116,964	89	1,314		
	Total	118,554	91			
COMI2	Between Groups	4,429	2	2,214	3,365	,039
	Within Groups	58,571	89	,658		
	Total	63,000	91			
COM1	Between Groups	4,709	2	2,355	1,082	,343
	Within Groups	193,758	89	2,177		
	Total	198,467	91			
COM2	Between Groups	,561	2	,280	,160	,853
	Within Groups	154,472	88	1,755		
	Total	155,033	90			
COO1	Between Groups	4,736	2	2,368	,796	,454
	Within Groups	264,698	89	2,974		
	Total	269,435	91			
COO2	Between Groups	8,918	2	4,459	2,912	,060
	Within Groups	134,753	88	1,531		
	Total	143,670	90			
INT1	Between Groups	4,619	2	2,310	1,289	,281
	Within Groups	155,881	87	1,792		
	Total	160,500	89			
INT2	Between Groups	4,564	2	2,282	1,158	,319
	Within Groups	171,392	87	1,970		
	Total	175,956	89			
SAT1	Between Groups	5,110	2	2,555	1,690	,190
	Within Groups	133,000	88	1,511		
	Total	138,110	90			
TRU1	Between Groups	2,019	2	1,009	,843	,434
	Within Groups	106,536	89	1,197		
	Total	108,554	91			
TRU2	Between Groups	4,503	2	2,252	2,387	,098
	Within Groups	83,964	89	,943		
	Total	88,467	91			

Appendix F

Brown-Forsythe – Robust Tests of Equality of Means

One and Several BAs

Robust Tests of Equality of Means

		Statistic[a]	df1	df2	Sig.
ADA1	Brown-Forsythe	,311	1	56,429	,580
ADA2	Brown-Forsythe	,026	1	50,775	,872
COMI1	Brown-Forsythe	,163	1	57,664	,688
COMI2	Brown-Forsythe	,426	1	58,945	,516
COM1	Brown-Forsythe	,175	1	50,635	,678
COM2	Brown-Forsythe	,086	1	49,719	,770
COO1	Brown-Forsythe	1,786	1	46,111	,188
COO3	Brown-Forsythe	,163	1	37,065	,689
INT1	Brown-Forsythe	,131	1	49,230	,719
SAT1	Brown-Forsythe	1,152	1	40,523	,289
TRU1	Brown-Forsythe	,889	1	53,420	,350
TRU2	Brown-Forsythe	,563	1	47,848	,457

Type of Suppliers

Robust Tests of Equality of Means

		Statistic[a]	df1	df2	Sig.
ADA1	Brown-Forsythe	1,981	2	26,729	,158
ADA2	Brown-Forsythe	,496	2	22,964	,615
COMI1	Brown-Forsythe	,557	2	24,263	,580
COMI2	Brown-Forsythe	,096	2	25,348	,909
COM1	Brown-Forsythe	1,014	2	24,726	,377
COM2	Brown-Forsythe	,850	2	27,872	,438
COO1	Brown-Forsythe	6,964	2	28,210	,003
COO2	Brown-Forsythe	3,854	2	25,084	,035
INT1	Brown-Forsythe	,867	2	28,063	,431
SAT1	Brown-Forsythe	,017	2	24,745	,983
TRU1	Brown-Forsythe	,000	2	28,259	1,000
TRU2	Brown-Forsythe	,230	2	25,347	,796

a. Asymptotically F distributed.

ISO 9001

Robust Tests of Equality of Means

		Statistic[a]	df1	df2	Sig.
ADA1	Brown-Forsythe	1,296	1	69,502	,259
ADA2	Brown-Forsythe	,118	1	80,291	,732
COMI1	Brown-Forsythe	1,168	1	66,617	,284
COMI2	Brown-Forsythe	4,306	1	53,052	,043
COM1	Brown-Forsythe	2,269	1	74,868	,136
COM2	Brown-Forsythe	1,137	1	70,914	,290
COO1	Brown-Forsythe	,179	1	83,271	,674
COO3	Brown-Forsythe	,842	1	87,956	,361
INT1	Brown-Forsythe	,277	1	70,257	,601
SAT1	Brown-Forsythe	1,102	1	76,965	,297
TRU1	Brown-Forsythe	,019	1	76,648	,891
TRU2	Brown-Forsythe	1,047	1	71,948	,310

a. Asymptotically F distributed.

Size

Robust Tests of Equality of Means

		Statistic[a]	df1	df2	Sig.
ADA1	Brown-Forsythe	2,317	2	76,775	,105
ADA2	Brown-Forsythe	,534	2	85,427	,588
COMI1	Brown-Forsythe	,595	2	81,090	,554
COMI2	Brown-Forsythe	3,158	2	54,963	,050
COM1	Brown-Forsythe	1,043	2	78,997	,357
COM2	Brown-Forsythe	,155	2	74,129	,857
COO1	Brown-Forsythe	,792	2	79,709	,456
COO3	Brown-Forsythe	2,916	2	75,781	,060
INT1	Brown-Forsythe	1,312	2	84,977	,275
SAT1	Brown-Forsythe	1,661	2	81,790	,196
TRU1	Brown-Forsythe	,821	2	80,144	,444
TRU2	Brown-Forsythe	2,386	2	84,703	,098

a. Asymptotically F distributed.

Lentgh of working relation

Robust Tests of Equality of Means

		Statistic[a]	df1	df2	Sig.
ADA1	Brown-Forsythe	,134	3	20,681	,939

ADA2	Brown-Forsythe	,445	3	22,478	,723
COMI1	Brown-Forsythe	,058	3	33,506	,981
COMI2	Brown-Forsythe	,146	3	41,390	,931
COM1	Brown-Forsythe	,179	3	44,798	,910
COM2	Brown-Forsythe	,486	3	38,088	,694
COO1	Brown-Forsythe	,343	3	25,291	,795
COO3	Brown-Forsythe	,301	3	28,727	,825
INT1	Brown-Forsythe	,370	3	43,023	,775
SAT1	Brown-Forsythe	1,334	3	35,193	,279
TRU1	Brown-Forsythe	,688	3	27,799	,567
TRU2	Brown-Forsythe	,900	3	25,505	,455

a. Asymptotically F distributed.

Appendix G

INWIDO
Great Windows & Doors

Malmö, 27.04.2018

Dear Inwido Supplier,

Invitation to participate in student thesis supplier survey
We hereby invite you as a selected Inwido supplier to participate in a student thesis survey performed by master program students at School of Economics and Management at University in Lund (LUSEM).

Inwido appreciates the opportunity to contribute to master students' thesis as part of being a corporate partner to LUSEM. This time we have invited students to support us with analyses and recommendations in development of our supplier relationships. We will emphasise that answers and information shared by you in the survey, will not be disclosed to Inwido and will be handled strictly confidential. All data collected will only be available at aggregated level for analyses and the students' recommendations to Inwido. The students have signed a non-disclosure agreement with us and information shared by you will only be used for the purpose described above.

To be able to invite you to this survey, Inwido has shared your company name and your mail address.

Inwido AB will thank you in advance for your contribution and we look forward to receiving interesting and relevant analyses based on input from you to continuous development of our supplier relationships.

Best regards,

Lars Jonsson
SVP Group Operations & Development

Inwido is Northern Europe's largest provider of window and door solutions. Our mission is to convert people's everyday wishes for well-being into features and benefits in our products and services by understanding the consumers. Therefore we make Great Windows and Doors.