THE INFLUENCE OF RELATIONAL NORMS AND RELATIONAL TRUST
ON COMMITMENT IN INTERORGANIZATIONAL RELATIONSHIPS

Master thesis, MSc Business Administration: Organizational and Management Control
University of Groningen, Faculty of Economics and Business

17 January, 2019

Ing. Rick Been
Studentnumber: S3120449
Kolibrievlinder 28
7943 TH Meppel
Tel: +31610713813
Email: R.been@student.rug.nl

Supervisor: Prof. dr. ir. P.M.G van Veen-Dirks
Co-assessor: Dr. E. G. van de Mortel

Wordcount: 14,722

The author would like to thank the organizations who participated in this study, the supervisors Mr. A. Rehman Abbasi and prof. dr. ir. P. M. G. van Veen-Dirks for their feedback, and dr. H. van der Bij for helping with the methodology section. Also to my family, and especially my wife, for supporting and helping in every way they could.
Abstract

This paper studies the relations between relational norms, relational trust and commitment in interorganizational relationships (IORs). Also, the influence of asset specificity and market uncertainty on the relation between relational trust and commitment is studied. According to the literature, these mechanisms could help decrease the high failure rate and improve the quality of the relationship of IORs. To understand the relationships between the concepts, the Social Exchange Theory (SET), Relational Exchange Theory (RET) and Trust-Commitment theory are used. It is hypothesized that the relational norms: continuity expectation, flexibility and information exchange have a positive influence on relational trust, and that relational trust has a positive influence on commitment. As well as asset specificity and market uncertainty should positively influence the relation between relational trust and commitment. After collecting 111 data items through the use of a survey, empirically evidence is found that the continuity expectations and information exchange indeed positively influence relational trust. Relational trust also positively influences commitment, which is increased by asset specificity. Furthermore, empirical evidence is found that the influence of continuity expectation and information exchange on commitment is mediated by relational trust, which indicates the importance of building relational trust in IORs.

Keywords: relational norms, relational trust, commitment, interorganizational relationships, asset specificity, market uncertainty, social exchange theory, relational exchange theory, trust-commitment theory
Introduction

In the past decades, globalization of the business environment has led to a global orientated and more intense competitive environment. As a result, organizations collaborate more in interorganizational relationships (IORs) to remain profitable by coping with the increasing standards and to increase competitive advantages (Aulakh, Kotabe, & Sahay, 1996; Teng & Das, 1998; Tomkins, 2001). These interorganizational relationships are relations between two or more organizations which cause benefits for both parties and can have a variety of forms, for instance joint ventures, buyer-supplier relationships, franchises, outsourcing and so on (Das & Teng, 1996). IORs provide benefits in ways of gaining access to competencies and skills needed to cope with these standards and to increase the competitive advantage (S. W. Anderson, Christ, & Sedatole, 2014; Das & Teng, 2001). Although the advantages are attractive, the questions raise if IORs are indeed helpful since the daunting failure rates are between fifty till eighty percent depending on the industry (Bakker, 2016; Hughes & Weiss, 2007; Ireland, Hitt, & Vaidyanath, 2002; Kale, Dyer, & Singh, 2002; Lunnan & Haugland, 2008; Oliveira & Lumineau, 2019). According to Oliveira and Lumineau (2019) and Park and Ungson (2001), this high failure rate of IORs is often the result of a conflict, opportunistic behavior or coordination and control problems. These conflict and problems prompt ailing relationship quality by weakening trust, satisfaction and commitment (Huang, Wang, Wu, & Wang, 2013; Oliveira & Lumineau, 2019). Multiple researches studied other mechanisms which influence IORs to overcome these problems (Coletti, Sedatole, & Towry, 2005; Dekker, 2004; Grandori & Soda, 1995; Tomkins, 2001; Williamson, 2005; Zaheer, McEvily, & Perrone, 1998), and suggest two main factors explaining the success of IOR: control and trust (Cao & Lumineau, 2015; Lui & Ngo, 2004; Teng & Das, 1998).

Several theories provide insights to understand both factors. The Transaction Cost Economics (TCE) provides a structural approach to manage IORs with formal management control mechanisms (Aulakh et al., 1996), however, the Social Exchange Theory (SET) and Relational Exchange Theory (RET) believe that more social forms of control, like trust and relational norms, are needed to successfully manage IOR (Palmatier, Dant, & Grewal, 2007; Ring & Van der Ven, 1992). These theories state that trust makes IORs successful, because it is of greater importance in reducing opportunistic behaviour than control (J. Cook & Wall, 1980; Das & Teng, 2001; Mayer & David, 1999). This is supported by Casson (1992, p. 11), “in a high trust environment, the true nature of economic relations cannot be inferred from the ownership structure because the relations that really matter exist in the social fabric beneath”. Using trust as the control mechanisms in IORs has thus been research, but most of these findings are mainly applicable on interpersonal or organizational level, which leaves room to test the workings of trust on the interorganizational level. The studies that have been done on interorganizational level tested trust as a general factor (Aulakh et al., 1996; Poppo, Zhou, & Ryu, 2008; Tomkins, 2001). However, trust can be divided into two different dimensions of trust: calculative and relational trust (Lewicki & Brinsfield, 2011; Lewicki & Bunker, 1996; Poppo, Zhou, & Li, 2016; Rousseau, Sitkin,
These dimensions differ substantially, because calculative trust is based on costs and benefits of the business agreement which will outweigh the opportunistic actions (Parkhe, 1993a; Srinivasan & Brush, 2006; Williamson, 1993), while relational trust arises from social relationships and there are beliefs of honesty and good faith efforts of others (Bromiley & Harris, 2006; Ring, 1996; Zaheer & Harris, 2005). Empirical work treats trust as an aggregate construct, which is problematic because these studies do not examine the different dimensions of trust (Poppo et al., 2016; Saparito, Chen, & Sapienza, 2004; Zaheer & Harris, 2005). However, research about these distinct types of trust in IOR are minimal and related to economic exchanges (Bromiley & Harris, 2006; Parkhe, 1993a; Ring, 1996; Williamson, 1993; Zaheer & Harris, 2005), partner performance (Poppo et al., 2016; Srinivasan & Brush, 2006) or competitive advantages (Barney & Hansen, 1994), but none of these studies provide evidence how to increase relational trust and commitment to overcome the problems which ail relationship quality and eventually lead to failure of the IOR.

This study tests the distinct dimension relational trust which is recommended by the study of Aulakh et al. (1996) to further examine the role of this relational trust in IORs. This dimension of trust is tested in relation with commitment to the IOR, which is instructed by Leuthesser (1997) because he confirms that commitment is another key component of relationship quality. Based on the literature above, this study aims to find empirical evidence about the following research question: “What is the relationship between relational norms, relational trust and commitment in interorganizational relationships?” The influence of two common risks in IORs (Aulakh et al., 1996; Poppo et al., 2016; Williamson, 1996) on the relationship between relational trust and commitment will be tested to further investigate this relationship, which leads to the second research question: “How does market uncertainty and asset specificity moderate the relationship between relational trust and commitment?”.

The goal of this paper is to explore which norms influence relational trust and commitment in IORs, because relational trust and commitment are the most important aspects of relationship quality (Huang et al., 2013; Oliveira & Lumineau, 2019). Increasing the relationship quality and taking away the probability of opportunistic behavior and coordination and control problems in IORs will decrease the high failure rates of these relationships. The norms used in this study are the relational norms continuity expectations, flexibility and information exchange. These norms can be used to effectively to manage the IOR and to overcome coordination and control problems, which is one of the causes of failures of IORs (Aulakh et al., 1996; Jap & Ganesan, 2000; Palmatier et al., 2007; Scanzoni, 1979). The relational norms will be tested with relational trust and commitment, because these components of relationship quality will reduce the chance of opportunistic behavior (Lewicki & Bunker, 1996; Poppo et al., 2016) which is another cause of failures of IORs.

This study will contribute to the existing literature in fourfold. First, this study is among the few that empirically distinguish relational trust from trust to show how this influences other parts of relationship
quality. Second, it explores the different types and influences of relational norms on relational trust and commitment to manage the IOR. Which relational norms are available is well described in the literature (Aulakh et al., 1996; Heide & John, 1992; Jap & Ganesan, 2000; Palmatier et al., 2007; Scanzoni, 1979), but how to use these norms to influence relational trust and commitment in IOR is unknown. Third, this study adds empirical evidence about the effect of the distinct dimension relational trust on commitment. Fourth, this study provides evidence if asset specificity and market uncertainty influence the relation between relational trust and commitment. Asset specificity and market uncertainty are two well-known and examined attributes which come along with working in an IOR (Aulakh et al., 1996), it is however unknown how these attributes influence relational trust and commitment.

The remainder of this paper is structured as following. First, the beginning of chapter two provides the theoretical framework which explains the definitions of the used concepts, followed by the theoretical foundations which provide information about the underlying theories. At the end of chapter two the literature review explains the key concepts and the hypothesis are formed based upon the literature and theory. Based on the hypothesis and the explained concepts, a conceptual model is presented. The third chapter describes the data collection, the measurements and how the data is analysed. In the fourth chapter the results and model fit are discussed. This paper ends with chapter five providing the discussion and conclusion, which contain the main contribution, the managerial relevance, the limitations and suggestions for further research.
2. Theoretical framework

This section explains the key concepts of this study. First, the concepts of trust, relational norms and commitment. Second, the theoretical foundation which reviews different theories concerning these concepts. Third, based on these theories the relationships between these concepts will be reviewed. Finally, based on the theory and the known relationships, the hypothesis and a conceptual model are developed.

**Trust:** Trust can be defined in many different ways; In the broadest sense, trust is simply having confidence that expectations will be realized (Luhmann, 1970). Trust, according to Boon and Holmes (1991), is the ‘positive expectations about another’s motives with respect to oneself in situations entailing risk’, or the willingness to rely on a partner in whom one has confidence (Moorman, Deshpande, & Zaltman, 1993). Trust is present everywhere, it is one of the fundamental pillars of social life. According to Morgan and Shelby (1994), trust is important in everyday life because people do not make exchanges when they don’t trust someone.

There are different types of trust known in literature; calculative and relational trust. Calculative trust is a form of trust where the participants in the relation believe the benefits from this trust will weigh more than the so-called costs. These costs can be self-interest and opportunistic actions (Parkhe, 1993b; Srinivasan & Brush, 2006). Calculative trust is ‘a continual reassessment of relative payoffs for whether it pays to cooperate’, which shows it relies on a forward-looking decision rule where identity is not relevant (Lewicki & Brinsfield, 2011; Lewicki, Tomlinson, & Gillespie, 2006). Calculative trust requires calculations to measure the effectiveness of the trust-relation, like calculating the benefits and costs of the cooperation (Bromiley & Harris, 2006). This is in line with the underlying reward of calculative trust, which are incentives; rewards and punishments (Poppo et al., 2016). These incentives positively influence the performance of both partners which is a positive result of a calculative relationship. Because of the fundamentals of calculative trust, some researchers do not think of calculative trust as real trust. Real trust has to be based on following your heart, and not following incentives or financial rewards (Poppo et al., 2016), which is defined in the literature as relational trust. Relational trust arises from a social relationship. In contrast to calculative trust, relational trust is based on honest beliefs about the goodwill and good faith efforts of others (Bromiley & Harris, 2006). According to Molina-Morales and Fernandez (2009) and Poppo et al. (2016), relational trust is also based on the identity and behavior of both partners and further characterized by shared and repeated interactions in the past. The strongest form of relational trust that can develop is a shared identity, which means that both partners consider each other’s interest as their own (Rousseau et al., 1998).

**Relational norms:** Norms in general may exhibit differences in some respects. Norms can apply to different levels, for example in entire societies, particular industries, individual firms or groups of individuals. In this case the level that is being addressed is individual firms in IORs. These norms focus
on a certain area concerning IORs, according to Macneil (1980) there are ‘discrete’ and ‘relational’ norms. Discrete norms contain expectations about a competitive relation between the partners, and both partners pursue strategies which are aimed towards their individual goal. In contrast, relational norms are based on mutuality of goals and aim to enhance the well-being of the IOR (Heide & John, 1992). Relational norms ‘provide guidelines for the initial probes that potential exchange partners may make towards each other’ (Scanzoni, 1979), so, these norms describe acceptable behavior for the IOR relationship (Aulakh et al., 1996). Heide and John (1992) provide evidence that relational norms are multidimensional, which means that they relate to certain types of behavior. Macneil’s (1980) concept of relationalism can be demonstrated in some different though associated domains, such as continuity expectations, flexibility and information exchange. Continuity expectations are the recognitions and expectations regarding the continuing of the relationship in the future (Aulakh et al., 1996). When continuity expectation is established in the IOR, both partners are satisfied with the relationship and therefore not looking for other partners (E. Anderson & Weitz, 1989; Dwyer & Schurr, 1987). According to Buckley and Casson (1988), continuity expectations can encourage the partner to see the cooperation not as means but as goal itself. Heide and George (1992) describe flexibility in partnerships as the willingness to adjust as circumstances change. From the perspective of IORs, this could refer to the flexibility to change if particular effects are detrimental for the partner because of changing circumstances. The last relational norm which is information exchange is, according to Anderson and Narus (1990), the ‘formal and informal sharing of meaningful and timely information between firms. Heide and John (1992) use the definition that parties proactively provide different types of information which is useful to the partner. They also explain that information exchange presents a safeguard for both partners, because there is a mutual expectation in which they provide and receive unforeseen information that can affect their actions and results.

Commitment: According to Morgan and Shelby (1994), the central factors that have to be present for a successful IOR are trust and commitment. Commitment to a relationship shows the willingness of partners to develop a mutual and solid relationship and bring offers for this (Ganesan & Hess, 1997), or, according to Moorman et al. (1993) ‘commitment to the relationship is defined as an enduring desire to maintain a valued relationship’. Relationship commitment can be seen as an exchange partner believing that the relationship with the partner is so important that they both offer maximum efforts to maintain the relationship. Both partners believe that it is worth working for this relationship so it endures indefinitely (Morgan & Shelby, 1994). The opposite of commitment is self-interest and opportunistic behavior, which can threaten the IOR itself and its performance (Williamson, 1996). Williamson uses the transaction cost theory to point out ‘transactional attributes that increase the risk that parties will defect from business agreements to achieve gains. Two of the most examined attributes are market uncertainty and asset specificity. Market uncertainty is defined as unpredictable changes in the market (Poppo et al., 2016), or as the perceived discontinuity in the operating macro environment (Aulakh et
al., 1996). In this study, market uncertainty refers to changes in customer preferences, competition or technological demands. Asset specificity refers to the amount that one partner has invested in assets that are specifically based on the cooperation is this relation with the chosen partner (Aulakh et al., 1996). Asset specificity in this study means that the company in which the respondent works, has invested in specific assets and risks large sunk costs if the IOR ends (Poppo et al., 2016).

2.1 Theoretical foundation:

Literature describes three main theories about the interplay between relational norms, trust and commitment in IORs: The Social Exchange Theory (SET), the Relational Exchange Theory (RET) and the trust-commitment theory. The Transaction Cost Economics (TCE) is also a well-known theory in management accounting, in which Williamson (1987) states that TCE puts transaction costs in a social context and labels trust as an important factor. However, trust is seen more as calculative than relational by TCE, so an economic perspective is used (Cao & Lumineau, 2015; Williamson, 1987). Because this study is focused on relational trust, not calculative trust, other theories than TCE are used. The social exchange theory (SET), trust-commitment theory and relational exchange theory (RET) are more relational and social based theories and because of their wider reach more suitable for this study (Cao & Lumineau, 2015; K. S. Cook, 1977; K. S. Cook & Emerson, 1978; Granovetter, 1985).

Social Exchange Theory: According to Cao and Lumineau (2015) SET provides explanations for interplays and taken decisions in relationships. They argue that SET is based on social exchanges between partners, which are reciprocal voluntary actions to repay the deeds to the other partner (Cao & Lumineau, 2015; Cropanzano, Anthony, Daniels, & Hall, 2017). SET is concerned with social relations, shared norms and values despite of contracting because trust is crucial for building a solid relationship. It is even that important, that Spekman (1988) defines trust as the cornerstone of the relationship. The reason for this is that relationships with a lot of trust are deeply valued. Both partners desire to commit themselves to this relationship (Hrebiniak, 1974). Only trustworthy partners are chosen, because commitment involves vulnerability (Poppo et al., 2016). Relational trust is, according to Lui & Ngo (2004), based on mutual perception. They also argue that mutual perception in IOR lead to a stronger relation, which results in the increase of commitment (Morgan & Shelby, 1994; Rhee, Kim, & Lee, 2014; Shapiro, Sheppard, & Cheraskin, 1992). Both partners put emphasis on creating trust in the relationship to prove they are trustworthy and to signal their commitment to the IOR (Lambe, Wittmann, & Spekman, 2001). When both partners put effort in the relationship and increase additional resources, it is called reciprocal commitment (Blau, 1964; Homans, 1958). According to Muthusamy and White (2005), to achieve reciprocal commitment there is a need for joint planning and an increase in information exchange. This results in a decrease in uncertainty for both partners and the need for joint planning can be seen as signaling continuity expectations to the partner (Muthusamy & White, 2005). Lui & Ngo (2004) complement this by stating that both firms are willing to adjust to the partner and
adopt a flexible attitude to prioritize the interest of the IOR above their self-interest. Concluding, the SET suggests that social exchanges, mutual perception and shared norms between partners in a IOR create relational trust. Relational trust leads to a stronger IOR and when both partners put effort in the relationship, reciprocal commitment is achieved.

**Relational Exchange Theory:** The RET explains, similar to SET, how IORs can be effectively managed by focusing on the social aspects (Jap & Ganesan, 2000; Palmatier et al., 2007). Both theories see trust as the critical component for relational exchanges and existence of the IOR (Lado, Dant, & Tekleab, 2008). Both theories differ in the way in which they effectively govern and control the IOR. SET uses social relationships and interactions while RET uses relational norms (Aulakh et al., 1996). The relational norms of RET focus on information exchange, flexibility, solidarity and continuity expectation in or about the IOR (Heide & John, 1992). Cannon, Achrol and Gundlach (2000) support this by stating that relational norms are effective in managing IORs. To conclude, RET states that the relational norms: information exchange, flexibility, solidarity and continuity expectation manage IORs and by complying the relational norms, relational trust is built (Aulakh et al., 1996).

**Trust-commitment theory:** This theory focuses on successfully maintaining and developing relational exchanges in IORs (Chen, Lin, & Yen, 2014). According to Spekman (1988) trust based relationships are so highly valued that partners in IORs strongly commit themselves to this relation, which is the reason that the trust-commitment theory sees trust as the determinant of commitment (Morgan & Shelby, 1994). This theory is supported by Achrol (1991), who called trust the ‘major’ determinant of commitment in a relationship, and by Moorman et al. (1993) who found that trust significantly affects commitment in a research relationship. According to the trust-commitment theory, networks with commitment and trust are highly valued because they produce cooperation (Morgan & Shelby, 1994), which in turn results in more and better communication (Vivek & Richey, 2013), the willingness to share more resources (Pesämaa, 2007), cooperative behavior (Liu, Su, Li, & Liu, 2010), a lower chance of opportunistic behavior (Joshi & Stump, 1999), better IOR performance (Moeller, 2010) and reduced uncertainty (Morgan & Shelby, 1994). So according to the trust-commitment theory, relational trust enhances commitment in IORs, which is also supported by the SET and RET theory.

### 2.2 Literature review and hypothesis building:

**Relational trust:** Trust can exist in different ways and according to Ganesan and Hess (1997) there are four different levels of trust; interpersonal level, organizational level, intra-organizational level and IOR level. This study focuses on the IOR level which is trust between organizations. Larson (1992) defines trust on the IOR level as a cluster of individual trust levels, because organizations are collections of individuals which has trust relations across the two partner organizations.
Also, different definitions of trust are known in literature, because there are different types of trust and trust can change in shape (Ganesan & Hess, 1997). Trust emerges when one partners perceives that the other partner intends to perform actions which are favorable for the firm, and that there will no unexpected actions that are unfavorable for the firm (Anderson & Narus, 1990). In the beginning of the relationship, calculative trust is developed. According to Bromiley and Harris (2006), calculative trust is based on the conscious and deliberate evaluation of conditions based on the future. These conditions are based on calculations about costs (i.e. what are the costs of cheating on the partner) and benefits (i.e. what are the benefits of working together) (Poppo et al., 2016). In calculative trust the willingness to trust is limited to situations with specific exchanges (Rousseau et al., 1998). After repeated interactions, positive expectations about the partner’s intentions are formed. The partners become attached through reciprocated concerns and interpersonal care and the willingness to rely on and trust the partner grows. Furthermore, the basis of trust shift from costs and benefits to honest beliefs about the goodwill and good faith efforts of the other (Bromiley & Harris, 2006), and over time relational trust derives (Rousseau et al., 1998). This shift is made visual in figure 1 originating from the study of Rousseau et al., (1998).

**A model of Trust**

![Diagram]

*Figure 1: A model of Trust (Rousseau et al., 1998)*

Relational trust can be divided in two different dimensions, a good-faith relationship and a shared identity (Rousseau et al., 1998). A good-faith relationship is a form of trust where the partners know each other sufficiently well so they can anticipate on the partner his behavior (Lewicki & Bunker, 1996). Lewicki and Bunker (1996) saw the good-faith relationship as a type of trust on its own, called knowledge-based trust. Knowledge-based trust is based on a history of interaction which causes both partners to predict each other’s behavior and that they will act trustworthily (Lewicki & Bunker, 1996). The key processes of this development in time are courtship and communication on regular basis (Shapiro et al., 1992). There is a thin line between a good-faith relationship and a shared identity. It is possible that two partners in an IOR cooperate, share assets and information but still talk about the other partner as ‘them’ instead of ‘us’ (Rousseau et al., 1998). However, this can be developed in time with repeated interactions, sharing resources and information which give rise to the shared identity (Gaertner, Dovidio, & Bachman, 1996). This shared identity is the broadest type of relational trust, also called identification-based trust by Lewicki and Bunker (1996). Identification-based trust exists because both partners recognize the intentions and desires of the other, which they appreciate and understand. This
mutual understanding is so highly developed that both partners can effectively make decisions for each other, improve joint outcomes and reduce the chance of opportunistic behavior (Lewicki & Bunker, 1996; Poppo et al., 2016).

According the literature, relational trust in an IOR has three roles. First, relational trust deterents opportunistic behavior in organizational exchanges (Bradach & Eccles, 1989). With a lack of relational trust, the probability that one of the partners chooses individual benefits above partnership performance is big. However, both partners are willing to reject individual and short-term gains in favor of the long term partnership gains if relational trust is embedded in the relationship (Axelrod, 1986; Banks, 1987). Second, hierarchical governance is substituted by relational trust. Relational trust creates mutuality of interests which works as a hierarchical governance, this causes that IOR objectives can be accomplished when ownership-based control economically or strategically is not feasible (Aulakh et al., 1996; Bradach & Eccles, 1989; Dwyer, Schurr, & Sejo, 1987). Third, relational trust in IORs has important efficiency and market performance implications. An increase in efficiency could be cost savings on control systems, market performance implications can be good results of the IOR which individually could not have been achieved (Aulakh et al., 1996).

**Relational norms:** According to Heide and John (1992), relational norms can apply to different levels. Relation norms can apply to whole societies (Gouldner, 1960), particular industries (Macaulay, 1963; Scherer, 1980), individual firms (Dornbusch & Scott, 1975) or groups of individuals (Bettenhaus & Murnighan, 1985). This study uses relational norms which apply to individual firms, because IORs exist out of two or more individual firms.

As prescribed in the beginning of this chapter, norms can differ in their general orientation and content. Norms can be divided in discrete and relational norms; discrete exchange norms contain expectations about a competitive relationship between the partners and both pursue strategies which are aimed towards their individual goals. However, relational norms are based on mutual goals and aim to enhance the well-being of the IOR (Macneil, 1980). This study uses the relational norms, because partners in IORs seek to achieve mutual goals and want to increase the well-being of their relationship.

Furthermore, Heide and John (1992) found evidence that relational norms in IORs are multidimensional, this means that relational norms relate to particular kinds of behavior. Macneil's (1980) concept of relationalism may be demonstrated in various different though related domains, such as continuity expectations, flexibility and information exchange. There are a number of different and overlapping relational norms found in literature, but these three relational norms are particularly important in IORs (Heide & John, 1992; Kumar, Scheer, & Steemkamp, 1995). Furthermore, trust involves expectations about future behavior, and it is guided by the past behavior of both partners in the IOR (Aulakh et al., 1996). Both firms in the IOR have to interpret each other’s acts and ways of doing business (Häkansson & Johanson, 1988). Aulakh et al. (1996) concluded that relational norms between the partners in an IOR
are important determinants of trust, because the norms are a representation of past interactions. Relational norms lead to future expectations of trust because, when they are considered equitable by the partner firms, they describe acceptable behavior in IORs (Aulakh et al., 1996; Ring & Van der Ven, 1992). Because of these reasons the relations norms are considered in this study.

**Continuity expectations:** Continuity expectations are important in IORs because building a relationship with a partner is complex and costly. If continuity expectations do not exist, both partners would not be motivated to build up the relationship because the costs outweigh the short-term benefits. Thus, continuity expectations are desired because it provides the basis to start an IOR (Poppo et al., 2008). This may also explain the results of Parkhe (1993b, p. 800) that there is a significant relation between cooperation and continuity expectations. For example, when partners in an IOR adopt a strategy for when one of the partners acts opportunistically, a shift will be made from a high- to a low cooperative return thereafter. This causes that cooperation can dominate, because all the partners know that it is financially the best choice to cooperate fully (Parkhe, 1993b). Both parties seek a high level of cooperation because this potentially enables greater exchange performance and continued savings from decreased transaction costs (Poppo et al., 2008). In contrast, Poppo et al. (2008) also assign continuity expectation as the solution to exchanges not characterized by long-term contracts but by short-term contracts (one year) or even a handshake agreement. Continuity expectation in this case is possible with the notion of repeated business, even if this is not contractually obligated. In this case the continuity expectations are based on the belief of both partners that continuation will occur through the renewal of short-term agreements (Poppo et al., 2008).

Furthermore, Poppo et al. (2008) describe two risks that shape reliance on continuity expectations based on the transaction cost economics (TCE). First, the TCE define asset specificity as the number one transactional risk, because the specialization of the assets is not transferable to other uses and termination of the relationship causes sizeable economic losses. The second risk that shapes the expectations of continuity is uncertainty. Uncertainty can be defined as the ‘unanticipated changes in circumstances surrounding an exchange’ (Noordewier, John, & Nevin, 1990). Uncertainty is a risk because it creates the need for adaptation in situations with asymmetric and incomplete information. This information makes it difficult for both partners to predict future market demands. This result in making expectations for the future can do more harm than good and the solution is to stay flexible to respond to the uncertainty or changing market demands (Poppo et al., 2008).

**Relationship between continuity expectation and relational trust:**

According to Macneil (1978), IORs function to regulate behavior because continuity is expected. Without this continuity expectation, the exchanges made between the partners are equal to the classic market ‘atomistic’ transactions (Macneil, 1978). This means, according to Poppo et al. (2008), ‘continuity is desired because otherwise the notion of a social institution that provides the bases for
building trust would be nonsensical’. Bijlsma-Frankema and Costa (2005) define the critical elements of trust as ‘the willingness to become vulnerable’ and ‘positive expectations’, which is complemented by Poppo et al. (2008) by stating that for example only information is shared (becoming vulnerable) when there is a sufficiently long window of future exchange (positive expectations). The willingness to accept this vulnerability, is considered by Vosselman and Van der Meer-Kooistra (2009) to be at the core of trust.

Continuity expectation also results in greater exchange performance and continued savings from decreased transactions costs, and Poppo et al. (2008) state that ‘this interdependence logic suggests that IOR trust is built incrementally over time as social institutions become more refined and capable of producing trust’. Because of these expectations, partners in IORs are willing to take the short-term disadvantages because they are more confident that future opportunities and long term advantages have greater impact (Parkhe, 1993b). Partners take these short-term disadvantages in the interest of the long-term viability of the IOR, because the time horizon for mutual benefits is extended (Aulakh et al., 1996). This is supported by Anderson and Weitz (1989, p. 312), who argue that trust is inherently about resolving short-term disadvantages to yield the long-term benefit. The trust in each other which is needed to take these short-term disadvantages for future opportunities, does not simply emerge over time but requires expectations of continuance (Poppo et al., 2008). This trust follows from cooperation, and the formation of trust is deliberately. This means that it is based on the rational assessment of continuity expectations so that it can be rewarding to behave as if we trusted others (Axelrod 1984, p. 124). This cooperation, together with performance, are enhanced by enabling trust when continuity expectations are existing in the IOR to future interaction (Dyer & Singh, 1998; Ring & Van der Ven, 1992; Telser, 1980). Without a window of continuity, short-term gains would derail trust (Poppo et al., 2008).

Seppänen and Blomqvist (2007) use SET to reflect that trust is based on three components. The first one is reliability, which is the expectation that both partners will act in the best interests of the alliance. The second is predictability, which means the consistency of the partner’s actions. The last one is faith, which means that the partner will not act opportunistically. Two components of trust, reliability and faith, are based on continuity expectations, so the following is hypothesized based on the literature and theory:

Hypothesis 1: There is a positive relation between continuity expectations and relational trust

Flexibility: Flexibility in IORs is important for three reasons according to Bleeke and Ernst (1991). First, flexibility in IORs is important because it is inevitable that the relative power, resources and objectives of one of the partners will gradually change. Sometimes during the life of the relationship, partners find external changes like new technologies which emerge, markets which shift or different customer needs, and even the most knowledgeable relationships cannot anticipate these trends that will occur during the life of the relationship. Also, internal changes can occur; changes in skills, strategies
or resources, which can significantly change the relationship. Second, flexibility is also important to overcome problems. Bleeke and Ernst (1991) researched that around 67% of the IORs ran into trouble during the first two years of their relationship, and the relationships with flexibility were able to recover better. Troubles can have different natures, but the main problem meeting initial goals often occurs. The last reason is that flexibility and success of the IOR are strongly linked. According to the study of Bleeke and Ernst (1991), around 40% of the IORs broadened the scope of their initial activities, like expanding to new product- or geographical markets. Around 79% of these IORs were successful, and 89% are ongoing. This is in contrast with the 33% of the IORs which were successful but whose activities remained unchanged. These figures are supported by Aulakh et al. (1996), who found significant evidence that flexibility enhances the IORs market performance. Aulakh et al. (1996) further pointed out that flexibility in an IOR with foreign partners is even more important. Foreign partner firms often operate in diverse cultural, economic and political environments, so making adjustments and being flexible is urgently needed to deal with these differences. Furthermore, the partner firm is often called upon the react to these unforeseen changes.

**Relationship between flexibility and relational trust:**

As discussed before, the pattern of interactions or exchanges provide the bond in which the exchanges occur and create mutual orientation together with the motive to cooperate. This determinates which actions are in the best interest of the IOR, and a ‘regime of trust induces reciprocity and coordinates action’ (Blau, 1964; Madhok, 1995; Ouchi, 1980). According to Aulakh et al. (1996) and Madhok (1995), creating a stock of goodwill increases the trust in the IOR. A stock of goodwill can be interpreted as the investment in building trust by the use of mutually oriented actions, also because the actions signal commitment to the IOR (Camerer & Vepsalainen, 1988). These signals convey a long-term orientation and create reciprocal obligations, which encourage the flexibility within the relationship (Blau, 1964). Because the overall goal of the IOR assists the progress of tolerance with partial goal conflict and temporary periods of inequity within the relation, flexibility creates trust in the IOR (Wilkins & Ouchi, 1983). This is further supported by Macneil (1980), who states that it is too costly to formally enforce provisions against defections (such as late delivery or payment), and that the flexibility needed to not enforce these in contract signals trust and builds trust in the IOR. That flexibility is needed to create trust in the IOR is supported by SET and RET. To achieve reciprocal commitment, which signals that both partners want to create trust in the relationship by proving that they are trustworthy, both partners are willing to adjust to the IOR and the partner to prioritize the interest of the IOR above their self-interest (Lambe et al., 2001; Lui & Ngo, 2004). RET supports this by stating that the relational norm flexibility is a mechanism to manage the IOR and by complying this, relational trust is built (Aulakh et al., 1996). Because of the literature and theory above, the following is hypothesized:

**Hypothesis 2: There is a positive relation between flexibility and relational trust**
**Information exchange:** According to the literature of Tomkins (2001), the need for information exchange consists out of two types of needs. First, the need for information exchange to create trust and check on the state of the relationship. This information is needed to verify the actions of the partner in accordance with expectations rather than what the partners should collectively do. The information needed to create trust is called Information Type 1 by Tomkins (2001), and this information relates to information on competence and on integrity in both action and communication. Second, the need for information exchange for the mastering of events by that relationship as an entity itself. Information will always be needed to help plan a collaborative future in the IOR by setting down what each partner wants to achieve by investing in the relationship, what actions need to be taken and how feasible the relative roles and goals are. Information Type 2 is the information needed to master events, which concerns planning what each party is going to do. How much information Type 1 and 2 are needed in the IOR is hard to predict, because both information types influence how trust is developed in the IOR, and thereby influencing the amount of information needed in the future.

**Relationship between information exchange and relational trust:**

Information exchange between partners in an IOR helps aligning expectations and perceptions. The expectation of receiving all the information on an ongoing basis, helps the partner to cope better with external market conditions and internal processes (Heide & John, 1992), and therefore, timely fosters information exchange trust (Mooorman et al., 1993; Morgan & Shelby, 1994). Lewicki and Bunker (1996, p. 121) further elaborate this point of view, and state that relational trust relies on information rather than deterrence. Exchanged information contributes to the predictability of the other partner, which contributes to relational trust. Regular information exchange and courtship are key processes in relational trust (J. C. Anderson & Narus, 1990; Shapiro et al., 1992), because this information exchange puts partners in constant contact with each other about preferences, wants and approaches to problems. These are necessary practices in IORs that facilitate justice and trust (Macneil, 1978; Uzzi, 1997) Without this information exchange, partners can ‘lose touch’, not only emotionally but also in predicting the reaction of the other and in the ability to think like the other (Lewicki & Bunker, 1996). Morgan and Shelby (1994) put forward that, when the past information exchange from partners have been frequent and high quality, which means reliable, relevant and timely, this will result in greater relational trust. Trust doesn’t evolve automatically, it is the result of information exchange, which aligns commitment and relational trust can be built in the course of the relationship (Vosselman & Meer-kooistra, 2009). According to Muthusamy and White (2005), the SET is to achieve reciprocal commitment which shows the commitment to the IOR and builds relational trust. They state that to achieve reciprocal commitment, there is a need for joint planning and an increase in information exchange, because it increases effective learning of both partners. Morgan and Shelby (1994) support this with the trust-commitment theory, where they state that relational trust and commitment is developed when firms pay attention to four
conditions; providing resources, corporate values, avoiding opportunistic behavior and communicating valuable information. Because of the literature and theory above, this study hypothesized the following:

**Hypothesis 3: There is a positive relationship between information exchange and relational trust**

**Commitment:** The literature written by Morgan and Shelby (1994) provides two kinds of commitment. First, commitment developed by identifying with, a person sharing, or internalizing the values of the organization. This kind of commitment is based on the identity of the partner, which is different from the second kind of commitment. The second kind of commitment is based on the cognitive evaluations of the instrumental worth of continuing the IOR. This type of commitment needs calculations of the gains and losses or rewards and punishments, it has a financial motivation and is not based on the identity of the partner. Morgan and Shelby (1994) continue with providing three precursors of relationship commitment, which directly influence commitment. First, relationship termination costs lead to an ongoing relationship which is seen as important, thus both partners generate commitment to the IOR. Second, relationship benefits is a precursor of commitment, because partners that deliver excellent benefits are highly valued by the other partner, and this partner will commit themselves to develop, establish and maintain the relationship with said partner. Third, shared values is what both partners in the IOR have in common concerning which goals, policies and behaviors are important or right. When both partners share the same values, they will be more committed to the IOR. When this commitment is achieved, it is seen by both partners as the key to achieve valuable outcomes for themselves, and they want to maintain and develop ‘this precious attribute in their relationship’ (Morgan & Shelby, 1994).

**Relationship between relational trust and commitment:**

Commitment is the result which is achieved by reasoning about mutual trust which is so important that it is ‘worthwhile striving to keep it’ (Martins, Faria, Prearo, & Arruda, 2017). This is so important, because relationships characterized by relational trust are so highly valued that both partners will commit themselves to such a relationship (Hrebiniaq, 1974). Trust enlarges commitment in the relational view of exchange – partners see exchanges as a mutual and cooperative concern, and they develop routines and practices which can benefit the IOR as a whole (Poppo et al., 2008). So, the most important determinant in acquiring commitment in the IOR is trust. Commitment and trust are two variables that improve the relationship between partners (Nammir, Marane, Rasheed, & Ali, 2012, p. 31), and these variables interact and increase each other (Morgan & Shelby, 1994, p. 31). According to Lui and Ngo (2004), the SET theory states that relational trust is based on mutual perception. Mutual perception in IORs lead to a strong relationship, which results in the increase of commitment (Morgan & Shelby, 1994; Rhee et al., 2014; Shapiro et al., 1992). Reciprocal commitment is achieved when both partners put effort in the relationship (Blau, 1964; Homans, 1958). With reciprocal commitment, both partners put emphasis on creating relational trust in the relationship to prove they are a trustworthy partner and they signal their commitment to the IOR (Lambe et al., 2001). The trust-commitment theory supports
this, Spekman (1988), Achrol (1991) and Morgan and Shelby (1994) state that the trust-commitment theory sees trust as the determinant of commitment because trust-based relationships are so highly valued that partners commit themselves to it. Also Moorman et al. (1993) found that trust significantly affected commitment in a research relationship, therefore this study hypothesizes, based on the literature and theory;

Hypothesis 4: Relational trust is positively related to commitment in IOR relationships.

Market uncertainty: Market uncertainty is equal to the unpredictable changes in the external environment. This challenges exchanges by requiring adaptation, because uncertainty creates instability which is difficult for the partners to understand and respond to (Carson, Madhok, & Wu, 2006). Exchange coordination is challenged by market uncertainty which creates the need for adaptation in situations full of asymmetric and incomplete information. Because predicting the future market is difficult, due to these informational problems, the optimal strategy is to remain flexible in agreements with the partner firm so both partners can adapt more fluidly to the changing environment (Tomkins, 2001). In the literature there are mixed views debating if market uncertainty strengthens or weakens the effect of trust on commitment. One of the views indicates that partners in the IOR can commonly deal with the uncertainty (Rousseau et al., 1998), and that trust in situations with uncertainty is the most valuable. There is no need for trust to coordinate exchanges, if there is no uncertainty (Ring & Van der Ven, 1994). In contrast, the other view indicates that uncertainty increases the information exchanges required to navigate the future between partners in the IOR. Because both partners are less likely to search for information outside the IOR, trust is less suitable to effectively adapt to market uncertainty (Lewicki & Brinsfield, 2011). Furthermore, with high levels of uncertainty, expectations of continuity are less likely because firms rather choose another partner which is less costly than adapting to the current partner in uncertain markets (Williamson, 1996).

Moderating effect of market uncertainty: According to Poppo et al. (2008), the relationship between relational trust and commitment is stronger with a high market uncertainty. Uncertainty and trust have an inevitably close relationship; when the level of uncertainty increases, the needed level of relational trust between firms also increases (Barney & Hansen, 1994). When relational trust is achieved in the IOR, both partners adapt to the market changes, and they expect to continue working together. Relational trust ensures continuous cooperation when both partners orientate to adapt, despite the uncertainty (Lado et al., 2008). This commitment is reached through relational trust, which is reached by previous interactions with continuity expectations of a shared future (Lewicki & Brinsfield, 2011). Furthermore, relational trust creates the ‘we’ orientation in the IOR, which causes that both partners continuously and quickly coordinate, which is critical for adapting to an uncertain market. Because of this orientation, it enables the partners to act as if the uncertainty is reduced, although this uncertainty is still there. Partners can act as if the future were more
certain, because relational trust is the fundamental building block of the IOR (Rousseau et al., 1998; Tomkins, 2001). RET argues that three relational norms are especially important during uncertainty in an IOR: information exchange, flexibility and continuity expectations. These three norms manage the IOR by creating relational trust and a ‘we’ orientation together with the commitment to have a shared future. The norm helps both partners to coordinate, cooperate and adjust to the changing market environment (Aulakh et al., 1996; Cannon et al., 2000; Heide & John, 1992). This is supported by the trust-commitment theory, because networks with trust and commitment work more closely together through mutual adaptation and cooperation in uncertain environments (Morgan & Shelby, 1994). Because of the literature and theory above, the following is hypothesized:

**Hypothesis 5:** The positive relationship between relational trust and commitment is stronger when market uncertainty is high than when it is low.

**Asset specificity:** Anderson and Weitz (1989) and Poppo et al. (2008) provide examples of asset specificity, also called reciprocal or idiosyncratic investments, known in practice: training and/or dedicating personnel to specific products, changes in tool development and product designs, adopting a common processing system or redesign of delivery systems or quality control. Basically, these reciprocal investments can align the incentive structure of both partners and it increases each other’s dependence on the other partner (E. Anderson & Weitz, 1989; Poppo et al., 2008). According to Poppo et al. (2008), partners in an IOR are willing to make such investments because this shows their willingness to work together, share risk and eventually change a competitive (win-lose) relationship to a cooperative (win-win) relationship (E. Anderson & Weitz, 1989). The gains from opportunistic behavior minus the costs of recreating an alternative IOR are lower than the gains from cooperation and repeated business (Poppo et al., 2008). According to the transaction cost economics, both partners create, intentionally or unintentionally, obstacles to abandon each other. These obstacles provide both partners the right incentives to make the IOR as productive as possible (Williamson, 1987). Partners who use reciprocal investments in each other change their incentives structure in such a way that it strengthens and deepens the level of involvement in the IOR, which lays the foundation for future involvement (E. Anderson & Weitz, 1989).

**Moderating effect of asset specificity:**

Relational trust is needed for partners to invest in specific assets for the IOR, because if continuity expectations and the ‘we’ orientation are not present in the relationship, partners cannot take the risk of these high termination costs (Poppo et al., 2008). Furthermore, relational trust is needed to counterbalance the risk of creating a dependent situation which can be exploited by acting opportunistically (Aulakh et al., 1996). With the presence of relational trust, a shared identity is reached and both partners want to do the right thing for the IOR, they do not want to take advantage of each other because continuity expectations exist (Poppo et al., 2016). When this is the state of the IOR,
partners are willing to take the risk and invest in specific asset for the IOR (Heide & Miner, 1992). Investing in specific assets contributes to building of reciprocal commitment, because making the investment provides a powerful signal to the partner. This signal creates more confidence and commitment in the IOR. (Anderson & Weitz, 1989). Furthermore, Morgan and Shelby (1994) corroborates this by stating that ongoing relationships with high termination costs are being viewed as important, which generates even more commitment. According to Lambe et al. (2001), the SET theory states that both partners put emphasis on creating trust in an IOR to prove they are trustworthy and to signal their commitment to the IOR. One of the possibilities by signaling this trust is with investing in specific assets. In this way, partners put effort in the IOR because they deeply value the trust in the relationship which increases the reciprocal commitment (Blau, 1964; Homans, 1958; Hrebinik, 1974). Because of these reasons, the following is hypothesized:

Hypothesis 6: The positive relationship between relational trust and commitment is stronger when the asset specificity is high than when it is low.

Conceptual Model: The relationships that are tested in this study with our research questions, are also visually represented in figure 2, the conceptual model.

Figure 2: Conceptual model
3. Methodology

This study uses the theory testing approach to get better insight in the interactions together with the quantitative nature of the hypotheses (Blumberg, Cooper, & Schindler, 2014; van Aken, Berends, & van der Bij, 2012). Theory testing is the most appropriate method because evidence concerning this subject is inconclusive (van Aken et al., 2012). Furthermore, this study tries to discover relationships between the different concepts relational norms, relational trust and commitment and therefore theory testing is the most appropriate way to test this (Saunders, Lewis, & Thornhil, 2009). This chapter contains the methodology of this study, beginning with the data gathering, followed by the different measurements and control variables and finishes with the data analysis.

3.1 Data gathering

This study uses quantitative and primary data collected through a survey developed by the thesis supervisor Mr. Rehman Abassi. A survey is used because this is the most appropriate for the theory testing method (Dillman, 2000). The survey is used multiple years for a longitudinal research and has been comprehensively tested. Originally the language of the survey is English, but because most of the contacted firms are Dutch the survey is translated to decrease the chance of translation errors. The survey is built up with questions containing a seven-point Likert scale ranging from 1 (strongly disagree) till 7 (strongly agree), because a seven-point Likert scale maximizes the reliability (Nunnally, 1979). A team of seven students selected the companies at random in a period of three months, but the companies had to meet certain conditions to define and increase the quality of the research. The companies must be commercially operating with a minimum size of ten employees, an annual turnover of 2 million euros and an IOR recorded in a formal, written contract. All of the students contacted the companies personally, the most common ways that were used were telephone calls, emails or direct contact. After approval of the company, an appointment was made with a representative of the company who was familiar with the contracts and the relationship. During this appointment, the student had to be present to ensure that the stated conditions were met by the company and to answer questions. The representative of the company had to answer the questions with one relationship in mind, so the point of view of only one of the partners in the relationship is measured. This study focuses from the viewpoint of one partner in the relationship, to be in line with previous survey studies (for example (Aulakh et al., 1996; Poppo et al., 2016; Teng & Das, 1998) that also used one-sided data, which makes it possible to compare the results. This means that the unit of analysis is on firm-level relationship, and it will be gathered from (inter)national firms located in the Netherlands who are in an IOR, which differs from the buyer-supplier relationship to alliances. In total the data set contains 111 observations collected in a short time-frame of three months, so the gathered data can be labeled as cross-sectional data. The author of this study contacted 53 different companies which resulted in 20 filled in surveys, which is equal to a response rate of 38%. The rest of these companies had no time (12 companies), no IOR with formal contract (9
companies), found that the survey was too long (7 companies), were not interested (3 companies) and did not require to the stated conditions (2 companies).

3.2 Measurements

The variables are measured based on existing and validated scales in the literature. The survey collects data with regard to trust, control, risk and external pressure in IORs. To measure the variables, the seven-point Likert scales are used for the dependent and independent variables. The variables used in this study are presented below, and the survey questions which measure these variables can be found in appendix A.

The relational norm *continuity expectations* is measured based on four items which are used in the study of Aulakh et al. (1996). Two of the four items measure if the company is looking for alternative partners, because when they do this relational norm is not developed sufficiently. The third item measures the commitment to the partner, while the last item questions the uncertainty in the environment of both parties.

The second relational norm *flexibility* is measured with two items adopted from Aulakh et al. (1996), which both take into account the willingness to make changes. The items are as follows, first: in this partnership, our firm and our partner firm expect to be able to make adjustments in the ongoing relationship to cope with changing circumstances. Second, flexibility in response to requests for changes is a strong characteristic in this partnership.

To measure the last relational norm *information exchange*, this study uses four items which are used in the study of Poppo et al., (2016). All these four items questions if the partners in the IOR exchange information if it could help the other partner. The items are as follows: first, in this relationship, any information that might help the other party will be provided to them. Second, exchange of information in this relationship takes place frequently and informally, and not only according to a pre-specified agreement/contract. Third, it is expected that the parties will provide proprietary information if it can help the other party. Last, it is expected that we keep each other informed about events or changes that may affect the other.

*Relational trust* is measured using three different items acquired from Poppo et al., (2016). These items are as follows: both parties would let the other make decisions because we both think like one another, both parties can effectively act for the other because both share the same understanding of what matters and both parties are confident that their interests will be fully protected, because both share a common identity.

To measure *commitment*, seven items are adopted from the study of Morgan and Shelby (1994). The items are: The relationship that my firm has with the partner firm ..., first; is something that we are very committed to. Second, is very important to my firm. Third, is of little significance to us. Fourth, is
something my firm intends to maintain definitely and indefinitely. Fifth, is very much like being family. Sixth, is something my firm really cares about. Final, deserves our firm’s maximum attention to maintain.

The item *market uncertainty* is measured using four items based on the study of Poppo et al., (2016). Two of the four items in the survey are related to changes made by customers, especially about changing preferences and demands. The third item is related to changing product technologies by competitors and the fourth item questions the time between changes in the market.

The second moderator variable is *asset specificity*, which is measured with three items used in the study of Aulakh et al., (1996). The first item gathers information about the costs of replacing the partner. The other two items question the types and amount of investments made by one of the partners. These items should give a clear view about the investments made for the partner.

### 3.3 Control variables

Two variables are included as control variables because they have influence on the tested relationships. Previous research shows there is a positive relation between commitment and experience with the partner and importance of the product (E. Anderson & Weitz, 1989; Lewicki & Bunker, 1996; Ganesan, 1994; Moorman et al., 1993; Morgan & Shelby, 1994). These control variables are measured using the survey and are represented by the striped lines in the conceptual model. Experience with the partner is a control variable because, according to Lewicki & Brinsfield (2011), previous interactions are positively related to commitment. Previous and repeated interactions create positive expectations and reciprocal concerns which are the cornerstones of commitment (Lewicki & Brinsfield, 2011; Morgan & Shelby, 1994). The experience with the partner is measured with a Likert-scale in the survey by asking how many times both partners have worked together. The second control variable is importance of the product. When the importance of the product increases, the need to receive those products also increases. This creates a more dependent situation that causes that the IOR is seen as important and both partners offer maximum efforts to maintain the relationship. This phenomenon is defined in literature as relationship commitment (Moorman et al., 1993; Morgan & Shelby, 1994). The importance of the product is measured by asking if there is a certain demand for the product or service from unknown customers.

### 3.4 Data analysis

After the data collection, several analyses were conducted. Three observations missed five data points, which were filled in using the relative mean substitution method. There are different paths to analyze the data and check for validity, reliability, common method bias and correlations. This study uses Structural equation modelling (SEM), which is a collection of statistical techniques which can examine
a set of relationships between one or more dependent and independent variables (Ullman & Bentler, 2013). To perform the SEM, several steps are involved before the model fit is tested.

The first step is to perform the Kaiser-Meyer-Olkin (KMO) and the Bartlett’s Test of Sphericity to analyze if the data is appropriate for analysis. The result of the KMO was acceptable (0.729), which is above the threshold of 0.6 (Allen & Bennett, 2010), which indicates that the relationships between the variables are strong enough to perform the CFA. The result of the Bartlett’s Test of Sphericity is significant (0.000), which indicates that the significance of the correlation is high enough to perform the CFA.

After analyzing the appropriateness of the data, the Confirmatory Factor Analysis (CFA) is conducted. The factor analysis and model fit are conducted in Lisrel8. The CFA is a ‘type of the structural equation modelling (SEM) that deals specifically with measurement models’, that is, the relationships between observed measures and latent variables’ (Brown, 2015). The CFA tests how well the measured items represent the constructs (Solutions, 2013) and creates a smaller set of independent, important variables by reducing the correlated and observed variables (Comrey, 1988). Nine items had to be removed because of cross loadings and to increase the model fit. The removed items are visible in Appendix B. The model fits the data satisfactorily with a goodness-of-fit index (GFI) of 0.86, a comparative fit index (CFI) of 0.91, a root mean square of error approximation (RMSEA) of 0.06 and all the factor loadings are highly significant (P < 0.001), which shows the unidimensionality of the measures (J. C. Anderson & Gerbing, 1988). Appendix A presents the CFA including the Composite Reliability (CR), Average Variance Extracted (AVE) and the Cronbach’s Alpha to test the validity and reliability of the data to confirm that the output of the data refers to the constructs that are being measured.

The validity is the extent to which the data represents the variable which it should intentionally measure, i.e. it shows the extent that an item is well measured by its indicators. The validity is measured in this study with the discriminant validity, Composite Reliability (CR) and the Average Variance Extracted (AVE). The discriminant validity is sufficient regarding the factor analysis. The factor analysis contains loadings from 0.53 up until 0.97, and one loading of 0.27 is kept after discussing with the thesis supervisor. Reasons for this are that the model fit is not affected while the item is included and the items is used is multiple highly regarded papers (Aulakh et al., 1996; Poppo et al., 2016). The CR is an indicator of how reliable the items of the SEM measurement model reflect the same underlying variable (Cho, 2016). The CR of the data varies between 0.601 and 0.812, which is all above the threshold of 0.6 (Huang et al., 2013), so, the data is reliable according to the CR. According to Fornell & Larcker (1981), the AVE ‘measures the amount of variance that is captured by a construct in relation to the amount of variance due to measurement error’. The value of AVE ranges from 0.401 till 0.592, which is sufficient because all the values of CR are above 0.6 which decreases the threshold of AVE from 0.5 to 0.4 (Huang et al., 2013). The reliability of the data is calculated with the Cronbach’s Alpha, which measures the
correlation of two tests that measures the same construct (Nunnally, 1978). One requirement of performing a Cronbach’s Alpha test is to measure at least three items (McDonald, 1999; Rammstedt & Beierlein, 2014), which results in four of the seven Cronbach’s Alphas can be calculated. The Cronbach Alpha’s value differs from 0.61 to 0.81, all above the threshold of 0.5 for weak reliability, but below the threshold of 0.7 for good reliability (Nunnally & Bergstein, 1994). The common method variance is variance due to the measurement method or instruments used, and not to the items measured. Due certain reasons it is suspected that common method variance is not present in this study. First, the items used in the survey are not developed but taken from recommended papers. Second, the questions asked in the survey are short and bounded. Third, the survey questions are answered by persons with much expertise and knowledge about the IOR. To empirically test if common method variance is present in the used data, a Harman’s single factor test is performed. Using an unrotated exploratory factor analysis will cause that a single item will load more than 50% when common method variance is present (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The result of the Harman’s single factor test shows that 26.34% loads on one factor, which is below the threshold of 50%, so there is no presence of common method variance.

Mediation relationship: Multiple techniques are known to test the effect of mediation (Baron & Kenny, 1986; Bollen & Stine, 1990; Clogg, Petkova, & Shihadeh, 1992; Gunzler, Chen, Wu, & Zhang, 2013; Mackinnon, Lockwood, Hoffman, West, & Sheets, 2010; Sobel, 1982). This study follows the recommendation of the paper from Mackinnon, Lockwood, Hoffman, West, and Sheets (2010) which compares 14 methods to test mediation effects. Two methods are chosen to create the most reliable result. First, the Freedman and Schatzkin (1992) test because this test has the highest statistical power in all conditions and is used to detect the intervening variable effect. This test measures the difference in coefficients, but the drawback of this test is that the Type I error rates can be high. Because of the increased Type I error rates, this study also performs a Sobel (1982) test. This test represents less statistical power but accurate Type I error rates, because it calculates with the product of coefficients. This test is also recommended when SEM is used (Bollen & Stine, 1990; Clogg et al., 1992; Gunzler et al., 2013; Sobel, 1982). Appendix C presents an overview with these tests of significance.
4. Results

This study uses the Structural Equation Modelling to test the hypothesis, because SEM has more advantages than regular path analysis; SEM estimates measurement errors and structural relations (Poppo et al., 2008), but it can also can test the descriptive ability of different models. This allows them to incorporate latent variables, compare them and provide all the information which is also provided by a standard path analysis like explained variance measures, total effects and path coefficients (Mitchell, 1992). To use the results of the SEM analysis, the model must be tested to see if it fits the data satisfactorily.

4.1 Descriptive statistics and Pearson correlation: The descriptive statistics and the Pearson correlation coefficient which are performed are presented in table 1. This table presents the mean, standard deviation and the correlation between the different items used in this study. The highest correlation in table 1 is found between the relational norms flexibility and information exchange (r = 0.56, p < 0.01), the second between relational trust and information exchange (r = 0.41, p < 0.01) and the third between commitment and asset specificity (r = 0.36, p < 0.01) or between continuity expectations and information exchange (r = 0.36, p <0.01). As expected, and written down in the literature review, commitment significantly correlates with all the relational norms and all the relational norms significantly correlate with each other. The other significant correlations are between relational trust and continuity expectation (r = 0.34, p < 0.01) and between relational trust and asset specificity (r = 0.19, p < 0.05).

<table>
<thead>
<tr>
<th>Construct</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Relational trust</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Continuity expectation</td>
<td>.32**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Flexibility</td>
<td>.18</td>
<td>.25**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Information exchange</td>
<td>.41**</td>
<td>.36**</td>
<td>.56**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Commitment</td>
<td>.34**</td>
<td>.29**</td>
<td>.25**</td>
<td>.32**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Market Uncertainty</td>
<td>.03</td>
<td>-.02</td>
<td>.15</td>
<td>.12</td>
<td>.04</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>7. Asset specificity</td>
<td>.19*</td>
<td>.04</td>
<td>.08</td>
<td>.15</td>
<td>.36**</td>
<td>.09</td>
<td>1</td>
</tr>
<tr>
<td>Mean</td>
<td>4.25</td>
<td>5.09</td>
<td>4.99</td>
<td>5.09</td>
<td>5.53</td>
<td>4.12</td>
<td>4.33</td>
</tr>
<tr>
<td>S.D</td>
<td>1.36</td>
<td>1.36</td>
<td>1.16</td>
<td>0.96</td>
<td>1.09</td>
<td>1.40</td>
<td>1.58</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed)

4.2 Model fit:

There has been a lot of research about the norms of the reliability of fit in SEM, this study will especially follow the norms stated by the study Evaluating model fit written by Hu and Bentler (1995) and additionally Structural Equation Modelling: Guidelines for determining model fit written by Hooper,
Coughlan and Mullen (2008). Because the normal theory of weighted least squares chi-square is sensitive to the sample size, this study uses other parameters (J. C. Anderson & Gerbing, 1988; Poppo et al., 2016). The root mean square error of approximation (RMSEA) of the model fit is significant at the 0.01 level with a value of 0.08, which indicates a mediocre fit according to MacCallum, Browne and Sugawara (1996) because it is below or equal to the threshold of 0.08. According to Hu and Bentler (1995) a good fit has norms of the Normed Fit Index (NFI) above 0.08, a Comparative Fit Index (CFI) above 0.95 and a Standardized Root Mean Square Residuals (SRMR) below 0.05. According to Hu and Bentler our model fits the data well, because all the fit indexes were above the stated thresholds (NFI = 0.93, CFI = 0.96, and SRMR = 0.042). Hooper, Coughlan, and Mullen (2008) add the Adjusted Goodness of Fit Index (AGFI) with a threshold of 0.90, and the model also fits this norm with 0.97. All these results together conclude that the model fits the data above average.

4.3 Model results:

Figure 2 presents the results of the path analysis performed in Lisrel8. The first number represents the standardized solutions and the second number the P-value. These results are used to accept or reject the stated hypothesis.

Relation between relational norms and relational trust: Figure 3 shows the effect of the independent variables continuity expectation, flexibility and information exchange on relational trust in IORs. The relationships between continuity expectations and relational trust in an IOR are positive and significant (0.20, p < 0.05), so hypothesis 1 is accepted. However, the relationship between flexibility and relational trust is not significant (-0.07, p = 0.47), so hypothesis 2 is rejected. The third relational norm information exchange is positively and significantly related to relational trust (0.37, p < 0.01), so hypothesis 3 is accepted.

Relation between relational trust and commitment: After testing and interpreting what influence the independent variables have on relational trust, the influence of relational trust on commitment, including the moderator relationships, can be interpreted. Relational trust has a strong significant and positive relation on commitment in IORs (0.26, p < 0.01), so hypothesis 4 is accepted. The moderators

---

Figure 3: Result path analysis with standardized solutions and p-values

Relation between relational trust and commitment: After testing and interpreting what influence the independent variables have on relational trust, the influence of relational trust on commitment, including the moderator relationships, can be interpreted. Relational trust has a strong significant and positive relation on commitment in IORs (0.26, p < 0.01), so hypothesis 4 is accepted. The moderators
influencing this relationship are hypothesized as market uncertainty and asset specificity. Figure 2 shows that the moderating effect of uncertainty is not significant, so hypothesis 5 is rejected. The relationship between relational trust and commitment is stronger when asset specificity in an IOR is high, because the result is positive and significant (0.17, p < 0.05), so hypothesis 6 is accepted. The interaction of the moderating variable asset specificity can be found in figure 4.

![Interaction moderating variable Asset specificity](image)

**Figure 4: Interaction asset specificity**

**Control variables:** The dependent variable commitment is controlled for the variables experience with the partner and importance of the product, because this study is not focussed to measure the relationship between these constructs. The control variables are indicated in the model with the striped lines. Figure 2 shows there is a significant and positive relation between commitment and importance of the product (0.17, p < 0.05) which is in line with the literature of Moorman, Deshpande and Zaltman (1993). This finding suggests that when the importance of the product is high, the commitment in the IOR is also higher.

**Mediator relationship:** To test if relational trust mediates the relationship between the significant relational norms continuity expectation and information exchange and commitment, the theory of Baron and Kenny (1986) is used. According to this theory, four conditions must hold if a mediating relationship exists. First, the dependent variable is significantly affected by the independent variable. Second, the mediator is significantly affected by the independent variable. Third, the mediator significantly affects the dependent variable. Fourth, the dependent variable is significantly affected by the independent and the mediating variable. The mediating relationship can also be full or partial. If all the conditions of Baron and Kenny (1986) are held, there is a full mediating relationship. A full mediating relationship is possible when the relationship between the independent and the dependent variable is insignificant when the mediator is controlled, and significant when the mediator is not controlled. When the first three conditions of the Baron and Kenny (1986) theory are held, there is a partial mediating relationship. A partial mediation exists when the relationship between the independent variable and the dependent
variable is less significant when the mediator is controlled compared to when the mediator is not controlled.

Figure 3 provides evidence that in both relations the first three conditions hold. First, commitment is significantly affected by continuity expectations and information exchange. Second, relational trust is significantly affected by continuity expectations and information exchange. Third, relational trust significantly affects commitment. Fourth, the relationship between the independent variable continuity expectation and information exchange and the dependent variable commitment is not insignificant when the mediator is controlled, only less significant (p < 0.1). Both relationships are thus a partial mediating relationship.

Appendix C provides an overview of the results from the Freedman and Schatzkin (1992) and Sobel (1982) for testing the mediating relationship. According figure 3, the direct effect of continuity expectation on commitment is weakly significant (p < 0.1). However, the indirect effect is strongly significant (p < 0.01) according both the Freedman and Schatzkin and the Sobel test. This means that relational trust is strongly significant and partially mediates the relationship between continuity expectation and commitment.

The direct effect of information exchange on commitment is also weakly significant (p < 0.1) according to figure 3, but here is also the indirect effect strongly significant according the Freedman and Schatzkin and the Sobel test (p < 0.01). This means that relational trust is also strongly significant and partially mediates the relationship between information exchange and commitment.
5. Discussion and conclusion

This study investigates the relationships between relational norms, relational trust and commitment. It hypothesizes that relational norms positively influence relational trust, and that relational trust positively influence commitment. This latter relationship is moderated by asset specificity and market uncertainty. The used SEM model is appropriate because there are constructs which are independent and dependent at the same time (Okpych, 2015). This model provides the empirical results needed to answer the research questions: 1) What is the relation between relational norms, relational trust and commitment in IOR, and 2) How does market uncertainty and asset specificity moderate the relationship between relational trust and commitment.

The results in figure 3 show that there is a positive significant effect of the relational norms continuity expectation and information exchange on relational trust, which supports hypothesis one and three. This means that both partners can increase the level of relational trust in the IOR by communicating continuity expectations about a shared future and exchanging information which can influence one of the partners. This is in line with Bijlsma-Frankema and Costa (2005) which define the critical elements of trust as ‘positive expectations’ and ‘the willingness to become vulnerable’. Information exchange and continuity expectation puts partners in constant contact with each other about preferences, wants and approaches to problems which contributes to the predictability of the partner and builds relational trust (J. C. Anderson & Narus, 1990; Lewicki & Bunker, 1996; Macneil, 1978; Poppo et al., 2008; Shapiro et al., 1992; Uzzi, 1997). Both of these relational norms reinforce the ‘we’ orientation resulting in the shared identity of relational trust and therefore these findings are in line with the SET and RET theory. One point of discussion is the direction of the relationship. For example, Dwyer et al. (1987) states that relational trust causes communication about information and expectations about the future, while Anderson, Lodish, and Weitz (1987), Aulakh et al. (1996) and Lewicki and Bunker (1996) argue that this communication leads to relational trust. Given the nature of this communication, this study follows the assumption of Anderson and Narus (1990) that this communication at any point in time causes relational trust. Moreover, the relationship between the relational norm flexibility and relational trust was not significant and thus not supported in this model. Other researches have provided evidence concerning the relation between flexibility and trust (Aulakh et al., 1996; Blau, 1964; Macneil, 1980; Madhok, 1995), but the relation between flexibility and relational trust has not been tested before. A possible reason, according the RET theory, for the lack of evidence could be that flexibility as relational norm is a mechanism to manage the IOR, but not a mechanism to build relational trust (Aulakh et al., 1996).

Relational trust was strongly significant and positive related to commitment which supports hypothesis four. This is supported by Hrebiniak (1974) who states that relationships characterized by relational trust are so highly valued that both partners commit themselves to such a relationship. Also, Lui and Ngo (2004), Moorman et al. (1993) and Poppo et al. (2008) support this relationship in stating that relational
trust enlarges commitment because partners see exchanges as mutual and cooperative, they develop routines and practices which benefit the IOR. Also, the theory is clear about the existence of this relationship. The SET and trust-commitment theory states that trust is the determinant of commitment to the relationship, because mutual perception in IORs lead to a strong relationship which results in the increase of commitment (Achrol, 1991; Morgan & Shelby, 1994; Rhee et al., 2014; Shapiro et al., 1992; Spekman, 1988). However, Morgan and Shelby (1994) and Nammir et al. (2012) state that relational trust and commitment interact and increase each other, while not significantly confirming the direction of this relationship. Morgan and Shelby (1994) further elaborate this statement by explaining that the direction of the relationship depends on which of the three precursors of relationship commitment has the strongest influence on the partners. When relationship termination costs or benefits are the strongest precursors, commitment is created due to costs and benefits which in time creates trust. But at the third precursor, shared values develop relational trust and due to this trust relationship commitment is created.

This relationship is not moderated by market uncertainty, which means that hypothesis five is not supported. That there is no evidence for this moderating relationship could have two reasons according to the literature. First, trusting partners are less likely to search for important information outside the IOR, which makes relational trust and commitment less suitable to effectively adapt to changes in the market (Krishnan, Noorderhaven, & Martin, 2006; Lewicki & Brinsfield, 2011). Second, collaborating partners prefer autonomous contracting despite of relational contracting, because continuity expectations are less likely because this precommits both partners to each other which is not favorable when choosing another partner is less costly than adaptation by the current partner. Organizations adapt to uncertain markets by selecting the best partner given the type of change in the market, so therefore uncertainty is likely to be associated with lower continuity expectations and thus lower relational trust (Poppo et al., 2008; Williamson, 1996). However, the relationship between relational trust and commitment is moderated by asset specificity, so hypothesis six is supported. To invest in assets specifically for the partner in the IOR, relational trust is needed to counterbalance the risk of creating a dependent situation. When relational trust is present, both partners do not want to take advantage of each other, partners are willing to take the risk and invest in these assets (Aulakh et al., 1996; Heide & Miner, 1992; Poppo et al., 2016). Investing in these specific assets provides a powerful signal of trust to the partner, which creates more confidence and commitment in the IOR (Anderson et al., 1987). Morgan and Shelby (1994) further corroborate this by stating that high termination costs increase the importance of the relationship which generates even more commitment. The interaction of asset specificity moderating the relationship between relational trust and commitment is visible in figure 4.

Another interesting finding is that relational trust mediates the relationship between the relational norms continuity expectations and information exchange and commitment. This means that the indirect effect of continuity expectation and information exchange on commitment is stronger when relational trust mediates this relationship, then the direct effect of these relational norms on commitment. This
mediating relationship is supported by Achrol (1991) who called trust the ‘major’ determinant of commitment in IORs, and also the trust-commitment theory states that a higher level of commitment can be achieved through relational trust (Morgan & Shelby, 1994). The last result is the positive and significant relation between the control variable importance of the product and commitment. This relationship indicates that the importance of the product increases the commitment to the IOR, because one of the partners in dependent on the other partner in providing this important product. According Morgan and Shelby (1994) and Moorman et al. (1993), this dependence increases the importance of the relationship which generates more commitment.

Main contributions: This study produced several main contributions. First, this study answered to the calling of the major need of empirical research on other aspects of relationship quality, which commitment is one of the mentioned aspects (Leuthesser, 1997). Commitment and relational trust are norms that should be achieved in IORs because it improves the relationship quality between partners (Nammir et al., 2012), and it decreases the probability of opportunistic behavior. Second, this study made the distinction between relational and calculative trust which answers the calling of Aulakh et al. (1996) to examine the different dimensions of trust in IORs. The literature provides much information about the general concept of trust (Aulakh et al., 1996; Poppo et al., 2016, 2008; Teng & Das, 1998; Holthausen, 2013; Moorman et al., 1993; Ganesan and Hess, 1997), but none of these researched relational trust. Third, this study empirically advances the theoretical arguments of SET, RET and the Trust-Commitment theory regarding the IORs between relational norms, relational trust and commitment. The results support SET (Granovetter, 1985; Lui & Ngo, 2004; Muthusamy & White, 2005) and RET (Aulakh et al., 1996; Heide & Miner, 1992; Palmatier et al., 2007) by showing that the relational norms continuity expectation and information exchange can improve the IOR by increasing relational trust. These relational norms are used to manage the IOR and avoid coordination and control problems. Relational trust is based on a social relationship resulting from repeated interactions and positive expectations which leads to the increase in commitment (Lui & Ngo, 2004). Both partners put emphasis on creating trust to prove they are trustworthy and to signal their commitment to the partner (Lambe et al., 2001). Blau (1964) and Homans (1958) stated that an increase in additional resources leads to reciprocal commitment in relations, and this study shows that investing specific assets in IOR leads to an increase in commitment. The results also support the Trust-Commitment theory (Achrol, 1991; Chen et al., 2014; Moorman et al., 1993; Morgan & Shelby, 1994; Spekman, 1988) where Spekman (1988) stated that trust is the determinant of commitment. Also, continuity expectations and information exchange increase commitment, but significantly less than when relational trust mediates this relationship.

Managerial relevance: This study contributes not only academically, but it is also of relevance for manager who has the responsibility to manage the IORs. The results highlight the importance of taking the relational norms continuity expectations and information exchange into account to build relational
trust and commitment to manage IORs. Therefore, manager should value the importance of the relational norms continuity expectation and information exchange of developing relational trust to increase the commitment to the relationship. The commitment to the IOR is significantly higher through relational trust which suggest that managers should put effort to create and build relational trust to achieve commitment to the IOR. This can be done by increasing continuity expectations and information exchange with the partner. With this knowledge, continuity expectation and information exchange can be used to avoid coordination and control problems, one of the causes of failure in IORs. The positive effect on relational trust and commitment decreases the probability of opportunistic behavior, the other cause of failure of IORs. The results of this study could thus be of great influence for managers to make the IORs a success to take away the causes of failure.

Furthermore, when investments are made in specific assets for the IOR, it has a positive effect on the relation between relational trust and commitment to the IOR. Relational trust counterbalances the risk involved by investing in specific assets because both partners do not want to exploit each other. These investments also signal trust and commitment which also has a positive influence on the IOR. Also, the control variable ‘importance of the product’ is positive related to commitment. This suggest that when the product is more important for a partner, that commitment to the IOR is higher. When there is an opportunity to produce highly important products for the partner, manager should take the increase in commitment into consideration as positive aspect for the IOR.

**Limitations:** While this study complements the research based on identifying the antecedents of relational trust and commitment in IORs, the results of this study should be evaluated in light of the following limitations. First, insignificant results could be caused due the small sample size. The small sample size is the result of the time limitation where the data gathering process were done in approximately one month. The sample size contained 111 surveys, and a higher sample size could improve the results of the tests and make analysis stronger. Increasing the amount of surveys is a reasonable solution, because different kinds of collaborations are possible to investigate and no clear sector is chosen. Second, calculating the reliability of three variables was not possible, due to too less items. According to McDonald (1999) and Rammstedt and Beierlein (2014), one requirement of performing a Cronbach’s Alpha test is to have at least three items. A lack of reliability attenuates correlation, which causes insignificant results (Anderson & Weitz, 1989). Third, when less than five percent of the data of one item was missing, the data was replaced with the mean substitution method. The drawback of this method is that it lowers the estimates of the variance which can lead to an underestimation (Raaijmakers, 1999), but because only a maximum of five percent is replaced this does not significantly change the outcome of this result. Deleting the items with more than five percent data missing has the drawback that the data set becomes smaller which influences the outcomes of this study. Fourth, there has not been made a clear distinction between the IORs where both partners are situated in the Netherlands or IORs where one of the partners is international. International firms could have
cultural differences which has influence on the antecedents of relational trust and commitment. Fifth, relational trust is represented in this study as a static concept, while it is subject of change over time. IORs are dynamic relationships which evolve to be, or become, successful (Inkpen & Currall, 2004). The components of the relationship, like relational trust and commitment, also change over time. To control for this change, more empirical research is necessary to observe the changing nature of trust and commitment. Six, all the variables are measured with two or more items, except the control variables. Both the control variables are measured with one item, which could have a negative influence on their reliability and validity.

**Future research:** This study proposes several opportunities for future research. First, hypothesis 2 and 5 are not supported due to insignificant evidence, while the SEM model is confirmed to have a significantly and statistically fit. Hence it is thus highly recommended to retest these hypotheses in future research using larger sample size. The second opportunity for future research is to use another type of trust, for example calculative trust, instead of relational trust. The study of Aulakh et al. (1996) provides significant evidence of the relation between flexibility and trust, which is not supported by this study. It is possible that flexibility is thus related to another type of trust. This also accounts for the moderating relationship of market uncertainty. To further research the different types of trust in IORs enhances our understanding of the different effects they produce. Third, another recommendation is to perform a longitudinal dyadic study, because a study on the long run will provide a more representative result of the dynamic nature of trust and its effect on commitment in IORs. The dyadic aspect of the research captures the bilateral aspect to understand the social dynamics of IORs. By researching both sides of the IOR, the effects of trust can be more visible and be captured as the dynamic relationship evolve. The last opportunity for future research is to divide IORs in the different relationships it contains (e.g. joint ventures, strategic alliances, buyer-supplier relationship). By particularizing on the different types of relationships, it is possible to reflect the results of this study and to see potential differences in building trust and commitment in different types of relationships. With these results it is possible to efficiently build trust and commitment in the way which is most appropriate for that kind of relationship.
Appendix A: Factor analysis

Items marked with '*' are reversed coded.

<table>
<thead>
<tr>
<th>Construct and validity</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relational Trust:</strong> AVE = 0,409 CR = 0,612 (Poppo, Zhou, &amp; Li, 2016)</td>
<td></td>
</tr>
<tr>
<td>2. Both parties can effectively act for the other because both share the same understanding of what matters</td>
<td>.53</td>
</tr>
<tr>
<td>3. Both parties are confident that their interests will be fully protected, because both share a common identity</td>
<td>.58</td>
</tr>
<tr>
<td><strong>Continuity Expectation:</strong> AVE = 0,431 CR = 0,601 (Aulakh, Kotabe, &amp; Sahay, 1996)</td>
<td></td>
</tr>
<tr>
<td>2. If our firm could find another partner, we are likely to switch to a new partner*</td>
<td>.70</td>
</tr>
<tr>
<td>3. There is a high level of uncertainty in this partnership*</td>
<td>.61</td>
</tr>
<tr>
<td><strong>Flexibility:</strong> AVE = 0,401 CR = 0,662 (Aulakh, Kotabe, &amp; Sahay, 1996)</td>
<td></td>
</tr>
<tr>
<td>1. In this partnership, our firm and our partner firm expect to be able to make adjustments in the ongoing relationship to cope with changing circumstances</td>
<td>.63</td>
</tr>
<tr>
<td>2. Flexibility in response to requests for changes is a strong characteristic in this partnership</td>
<td>.62</td>
</tr>
<tr>
<td><strong>Information Exchange:</strong> α = 0,636 AVE = 0,407 CR = 0,637 (Poppo, Zhou, &amp; Li, 2016)</td>
<td></td>
</tr>
<tr>
<td>1. In this relationship, any information that might help the other party will be provided to them</td>
<td>.69</td>
</tr>
<tr>
<td>3. It is expected that the parties will provide proprietary information if it can help the other party</td>
<td>.54</td>
</tr>
<tr>
<td>4. It is expected that we keep each other informed about events or changes that may affect the other party</td>
<td>.59</td>
</tr>
<tr>
<td><strong>Commitment:</strong> α = 0,806 AVE = 0,579 CR = 0,803 (Morgan &amp; Shelby, 1994)</td>
<td></td>
</tr>
<tr>
<td>The relationship that my firm has with the partner firm...</td>
<td></td>
</tr>
<tr>
<td>2. ... is very important to my firm</td>
<td>.81</td>
</tr>
<tr>
<td>3. ... is of little significance to us*</td>
<td>.64</td>
</tr>
<tr>
<td>6. ... is something my firm really cares about</td>
<td>.82</td>
</tr>
<tr>
<td><strong>Market Uncertainty:</strong> α = 0,807 AVE = 0,592 CR = 0,812 (Poppo, Zhou, &amp; Li, 2016)</td>
<td></td>
</tr>
<tr>
<td>1. Customers’ preferences for my firm’s products change constantly</td>
<td>.85</td>
</tr>
<tr>
<td>3. The competitors of my firm rapidly advance their product technologies</td>
<td>.76</td>
</tr>
<tr>
<td>4. Nothing stays the same for long in the industry my firm is in.</td>
<td>.69</td>
</tr>
<tr>
<td><strong>Asset Specificity:</strong> α = 0,610 AVE = 0,450 CR = 0,670 (Aulakh, Kotabe, &amp; Sahay, 1996)</td>
<td></td>
</tr>
<tr>
<td>1. Our firm has made significant investments that are specific to our relationship with this partner firm</td>
<td>.97</td>
</tr>
<tr>
<td>Please respond to the following statements about investments in the collaboration/alliance and dependence of partners on each other (partner=partner firm) ...</td>
<td></td>
</tr>
<tr>
<td>2. ... Our firm products/technologies are tailored to meet the requirements of this partner</td>
<td>.29</td>
</tr>
<tr>
<td>3. It will be very costly for us to replace this partner</td>
<td>.57</td>
</tr>
<tr>
<td><strong>Experience with partner</strong> (Morgan &amp; Shelby, 1994)</td>
<td></td>
</tr>
<tr>
<td>1. How many times have the two firms worked together in the past?</td>
<td>1</td>
</tr>
<tr>
<td><strong>Importance of product</strong> (Morgan &amp; Shelby, 1994)</td>
<td></td>
</tr>
<tr>
<td>1. We are witnessing demand for our products and services from customers who never bought them before</td>
<td>1</td>
</tr>
</tbody>
</table>

Notes:
α = Cronbach's alpha

All items are measured using a seven-point Likert scale that ranges from (1: "Strongly disagree"; 7: "Strongly agree")

In total 9 items are deleted after CFA (Relational Trust 1, Continuity Expectation 1,4 , Information Exchange 2, Commitment 1,4,5,7, Market uncertainty 2)
Appendix B: Removed items factor analysis

Items marked with ‘*’ are reversed coded.

**Removed Items CFA**

**Relational Trust:** *(Poppo, Zhou, & Li, 2016)*
1. Both parties would let the other make decisions because we both think like one another.

**Continuity Expectation:** *(Aulakh, Kotabe, & Sahay, 1996)*
1. Our firm and our partner firm are very committed to each other.
4. We and our partner firm are not sure how long out relationship will last *

**Information Exchange:** *(Poppo, Zhou, & Li, 2016)*
2. Exchange of information in this relationship takes place frequently and informally, and not only according to a pre-specified agreement/contract

**Commitment:** *(Morgan & Shelby, 1994)*
The relationship that my firm has with the partner firm ...
1. ... is something that we are very committed to
4. ... is something my firm intends to maintain definitely
5. ... is very much like being family
7. ... deserves our firm’s maximum attention to maintain

**Market Uncertainty:** *(Poppo, Zhou, & Li, 2016)*
2. The customers of my firm demand the very latest technologies

---

**Appendix C: Mediation effect: Freedman & Schatzkin and Sobel test**

<table>
<thead>
<tr>
<th>Type of method</th>
<th>Estimate</th>
<th>Test of significance</th>
<th>Continuity expectation</th>
<th>Information exchange</th>
<th>Continuity expectation</th>
<th>Information exchange</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freedman &amp; Schatzkin (1992)</td>
<td>$\tau - \tau'$</td>
<td>$z = \frac{\alpha \beta}{\sqrt{\sigma^2 \tau^2 + \beta^2 \sigma^2 \tau'}}$</td>
<td>$\tau$</td>
<td>0.22</td>
<td>0.34</td>
<td>$a$</td>
</tr>
<tr>
<td>$\tau'$</td>
<td>0.32</td>
<td>0.53</td>
<td>$b$</td>
<td>0.27</td>
<td>0.27</td>
<td></td>
</tr>
<tr>
<td>$\sigma_\tau$</td>
<td>0.09</td>
<td>0.10</td>
<td>$s_a$</td>
<td>0.09</td>
<td>0.12</td>
<td></td>
</tr>
<tr>
<td>$\sigma_{\tau'}$</td>
<td>0.09</td>
<td>0.15</td>
<td>$s_b$</td>
<td>0.07</td>
<td>0.07</td>
<td></td>
</tr>
<tr>
<td>$\rho = \frac{\tau}{\tau'}$</td>
<td>0.32</td>
<td>0.41</td>
<td>Sobel (1992) test</td>
<td>Test statistic: 2.614284</td>
<td>2.994271</td>
<td></td>
</tr>
<tr>
<td>$N$</td>
<td>111</td>
<td>111</td>
<td>Std. Error</td>
<td>0.033049</td>
<td>0.051398</td>
<td></td>
</tr>
<tr>
<td>$N - 2$</td>
<td>109</td>
<td>109</td>
<td>Two tailed $p$-value</td>
<td>0.008941</td>
<td>0.002751</td>
<td></td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Freedman &amp; Schatzkin (1992) test</th>
<th>$\tau - \tau'$</th>
<th>$\sigma_{\tau - \tau'}$</th>
<th>$t_{\tau - \tau'}$</th>
<th>Two tailed $p$-value</th>
<th>0.000864</th>
<th>0.009226</th>
</tr>
</thead>
</table>
Reference List:


industrial networks.


