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**THE IMPACT OF RELATIONAL ORIENTATION TO PROJECT  
BUSINESS PERFORMANCE**

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**ABSTRACT**

The main object of the study is to find out: what kind of relational aspects and business practices project business relationships encompass and how are these relational aspects connected to a business or project performance? In order to answer this research question, it was necessary to find a comprehensive set of articles and analyse them thoroughly. Thus, it was logical to choose a research method that combined the best aspects of qualitative and quantitative methods. The research was simultaneously descriptive and explanatory, as it did not only describe the causal mechanism between inter-firm actions and the outcome, but also explained how the causal mechanism actually functioned.

The data used in this thesis has been collected from the SciVerse Scopus, an academic database. Scopus was a logical choice as its' massive data library guaranteed that all the relevant articles concerning inter-firm collaboration could be taken into account. Articles were sought on the basis of their title, abstract and keywords by using several keyword combinations. Project business was a conscious choice, as the literature has not focused specifically on the project business side, thus it was possible to complement existing literature by analysing relational practices in this specific area.

There are two main findings from this study. First of all, in most of the cases, relational action had either a direct or indirect positive effect on performance. Effectiveness in turn is dependent on the quality of the relational actions. Another important finding was that certain relational actions foster multiple outcomes and relational behavior might even produce unintentionally value gains for collaborating companies. More importantly, the causality between relational behavior and increased project business performance exists, although the effectiveness of relational actions varies between projects.

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**KEYWORDS:** Inter-firm relationship; Relational behavior; Project business; Partnership





## 1. INTRODUCTION

Inter-organisational relationships (IORs) have recently become a hot topic in the field of management and various disciplines have contributed to our understanding of inter-organisational relations. Nowadays, inter-organisational relationships are not just under the magnifying class of the academics, as also companies have started to realize the potential of IORs. According to Dyer & Singh (1998), collaboration can bring companies benefits that they would not be able to generate in isolation. Hence, it is no wonder that inter-organisational relationships have gained popularity.

When the University of Vaasa suggested that I would investigate inter-organisational relations in a project context, it was not a difficult decision for me to agree to. In my view, the topic is interesting and further, presents an excellent opportunity to broaden my perspectives on project business. More precisely expressed, this thesis will investigate the impact of relational orientation to a project business performance by implementing a systematic literature review.

Systematic literature review was a logical method of choice, as the purpose was to focus on certain high-quality journals and investigate the topic with strict criteria parameters. One particular research question guided the process: *What kind of relational aspects and business practices project business relationships encompass and how are these relational aspects connected to a business or project performance?*

In order to answer this research question, it was necessary to find a comprehensive set of articles and analyse them thoroughly. Thus, it was logical to choose a research method that combined the best aspects of qualitative and quantitative methods. Referring to an empirical research that relates to the earlier researches in the project business area, it was possible to review relational aspects in a project environment very diversely. All in all this research took a closer look into thirty-five articles. The selected thirty-five research articles were analysed by a multi-stage research process.

At the first phase, relational aspects of selected articles were analysed more specifically. One by one, the articles were evaluated on how reliable the findings presented in the

article were. After the reliability of the articles had been assessed it was time for the more detailed analysis. All the thirty-five articles were once again analysed in order to identify what kind of causal relationships between relational aspects the authors had found in their research. One also draw several causal maps that visualised the research results in an easily interpretable format.

The paper has been structured as follows: First, this paper will familiarise the reader with the theory of inter-organisational relations by shedding light on the terminology. This is done to guarantee the reader's capability to internalize the findings of this thesis. Second, this paper will paint an overall picture about the reasons why companies enter into an inter-organisational relationship by explaining why certain actions foster relationship quality. Finally, this paper will realise how an improved relationship quality affects overall performance.

As the reader becomes more familiar with the topic after the first chapters, it delves deeper into topic. At first, the research methods will be covered. Consequently, other researchers will be able to repeat the research and also understand the process behind the results. In this section the reader is introduced to the research question and research aims. In addition, thesis validity and reliability will be assessed in the section. The purpose of the methodology chapter is to ensure the reader's capability to further internalize the text.

In the fourth chapter the results will be presented. The chapter will be organised so that it proceeds from the general findings to the more specific ones. By doing so, the reader will understand the overall picture and is thus, able to interpret the more specific findings as well. It is important to note that the research did not only focus on the articles' content, as it was also interesting to know whether actual research supported presented relational findings.

Finally, the fifth chapter will link the findings together and draw conclusions. The purpose of this chapter is to synthesize the readers' thoughts and propel the reader to a new view of the subject. All in all, this thesis will provide the reader a comprehensive overview about inter-organisational relationships that occur between two or more companies in a project business area.

## **2. INTER-ORGANISATIONAL RELATIONS**

This section focuses on inter-organisational relationships and is structured as follows; first, this chapter will provide a brief overview of the key issues concerning inter-organisational relationships and shed light on the terminology. Second, this section explores companies' motives for entering into deep inter-organisational relationship. Third, this chapter will point out what actions foster the relationship quality and will unveil how companies can benefit from the relationship. The reader will be provided with a good overall picture about the inter-organisational relationships and understand why companies' interest towards them has increased lately. Even more importantly, this section will clarify how relational actions and conditions affect the partnering companies' overall performance.

### **2.1 The essence of inter-organisational relationship**

Various disciplines have contributed to our understanding of inter-organisational relations. Based on the literature review, one can argue that inter-organisational relationship is a reciprocal relationship where value is co-created. According to Yami & Nemeh (2014), inter-organisational relationship can either be dyadic or multiple by its nature. A dyadic relationship is a bilateral relationship, whereas a multiple relationship exists between three or more partners. According to Ford & McDowell (1999), companies might simultaneously have several on-going inter-organisational relationships, which are all worth investing in. However, companies tend to favor certain relationships, as some are more valuable than others.

The framework of inter-firm collaboration has several forms such as partnership, network, joint venture and strategic alliance. Verganti & Pisano (2008) state, that not all collaboration forms are suitable for all businesses, which is why companies should carefully consider which collaboration form suits their purposes best. In the following chapters this paper deals with the most common collaboration forms just mentioned, which each have their own specific characteristics.

In 1998, the Audit Commission defined partnership as “*an agreement between two or more independent bodies to work collectively to achieve an objective*”. Even though the definition is broadly used, it has faced criticism due to its rather vague nature. Slater (1998) defines partnership as a collaborative working arrangement among partnering companies. Thus, partnership can either be a process where separate companies merge into a single entity, or a process where the companies’ recurrent collaborative actions foster a probability of mutual benefits for all companies in the relationship. Partnership can also be seen as an umbrella term for different collaboration forms.

There are many definitions for strategic alliance, which all see it as an independent collaboration form. According to Yoshino & Rangan (1995), a strategic alliance is a partnership form where two or more companies remain independent, but collaborate in order to reach settled goals. Dussauge & Garrette (1995) argue that it is actually a prerequisite for strategic alliance that partnering companies remain independent. Many researchers have also stressed the importance of trust; as for example Phan (2000), who argued that strategic alliances are very trust-centric relationships.

Joint-venture is a collaboration form where partnering companies form a new entity to undertake a certain project. According to Walker & Johannes (2001), joint ventures require substantial resources from the parent companies. Thus, most joint ventures are formed by large companies. More importantly, Beckman, Haunschild & Phillips (2004) see that parties are usually committed to the long-term relationship, as they see joint ventures as a way to obtain economies of scale over competitors.

Several definitions for the term network exist in current literature. Inter-organisational network is widely seen as a set of collaborative organisations. For example, Jenssen and Nybakk (2013) have amplified this definition by arguing that three or more companies are needed to form a network, which separates it from the other collaboration types. According to Ford & McDowell (1999), networks are prone to changes as member’s disputes usually reflect throughout the network. Hence, the argument of Huikkola et al. (2013) that business networks are complex by their nature is well founded. Despite the criticism, networks can be the source of competitive advantage as member’s adaptability emerges (Katzy & Crowston, 2008).

Competitive advantage can be seen as a main reason for collaboration. Companies see collaboration as a way to gain competitive advantage and strive to find a partner that ideally supports this purpose. Many researchers, such as Chang & Gotcher (2007), see business relationships as an effective way to produce competitive advantage over competitors based on diverse benefits. Recent evidence suggests that the type of additional value that companies seek from the relationship differs; as some pursue superior resources, while others aim to mitigate risks (Lambert & Enz, 2012).

Even though inter-organisational collaboration typically generates mutual benefit for the parties involved, companies' intentions are still to gain maximum benefit from their partnerships. According to Dyer & Singh (1998), collaboration can bring companies benefits that they would not be able to generate in isolation. They argue that partners have to combine, exchange or invest in idiosyncratic assets in order to achieve a high profit margin. In addition, Ford & McDowell (1999) argue that inter-organisational relationship appears to be first and foremost a channel to increase own competitive success via collaboration. Their argument makes sense, as companies do not collaborate without benefitting from it.

## 2.2 Inter-organisational collaboration: motives and outcomes

Research on inter-organisational relationships started in the eighties. For example, Kohtamäki et al., (2012) see that interest towards business relationships has emerged lately. In other words, managers are turning towards collaborative relationships more often than before as was found by Lambert & Enz (2012). Researchers seem to be well aware of the reasons behind this trend, as a number of reasons surfaced from the literature review.

According to Van der Vaart & van Donk (2008), structural changes have forced companies to collaborate by arguing that emerged global competition fosters the probability that inter-organisational relationships will be formed. However, prevailing circumstances only partially explain managers' behavior. Researchers seem to have a consensus that a large amount of inter-organisational relationships have emerged for one

reason above all; companies have begun to realise how beneficial inter-firm collaboration can actually be.

According to Dyer & Singh (1998), companies collaborate in order to achieve competitive advantage over those competitors who do not collaborate. Other researchers seem to agree with this argument, as for example Chang & Gotcher (2007) who argued that inter-organisational relationship might significantly foster companies' competitiveness in turbulent markets. According to Ballantyne et al., (2011), even unintentional value gains are possible, as co-created value might come from unexpected places.

One important aspect concerning value proposition in inter-organisational relationships is the frequency of collaborative actions. According to Liker & Choi (2004), companies that constantly invest in their relationship will likely gain competitive advantage over their competitors. For example, Lambert & Enz (2012) have argued that value co-creation is a social and economic process where participative companies are obliged to contribute towards common goals. Continuous development naturally reflects to the relationship's successfulness.

It is important to realise that companies do not necessarily seek direct return from their relationship, as they can also pursue indirect value. According to Borgatti & Foster (2003), companies have various underlying motives for inter-organisational collaboration such as knowledge transfer, risk mitigation and resource diversification. The article of Dyer & Singh (1998) amplifies their findings by presenting four main inducements; relation-specific assets, knowledge sharing routines, complementary resources and effective governance; all of which are means to gain competitive advantage.

Even though other researchers in this area have found very similar results than Dyer & Singh (1998), these classifications should only be interpreted as indicative compartmentalization, as many companies have intention to gain very specific additional value from their business relationship. Thus, collaboration is needed to pursue this advantage, as in isolation companies would not have capabilities to outperform their competitors.

For example Dyer & Singh (1998), argue that one of the most common reasons for collaboration seems to be access to complementary resources that will allow higher

profits. According to Lambert & Enz (2012), companies might see business relationships as a pathway towards substantial resources that is well in line with the previous argument. Superior resources foster the possibility that companies will be able to outperform their competitors based on economies of scale and thus, gain competitive advantage.

On the other hand, collaborative companies might also aim to reduce economical risk by sharing the expenses. For example, Blois (2012) has argued that a complex and risky project is a favorable starting point for an inter-organisational relationship, as companies are not willing to take the risk alone. According to Mazet & Ghauri (2006), the higher the project stakes are, the more likely it is for a company to diversify the risk through partners. Further, Lahdenperä (2010) argues that risk sharing fosters the effectiveness of inter-organisational relationship due to emerged communication. However, other researchers have not verified his argument that reduces its validity degree.

According to Ballantyne et al., (2011), intangible resources foster relational quality, through for example an enhanced knowledge sharing process, which decreases the probability of information breaks and deepens the learning process. According to Huikkola, Ylimäki & Kohtamäki (2013), a well-executed knowledge sharing process can be the source of competitive advantage based on the cause-effect. An efficient knowledge sharing process enhances the relationship quality, which in turn fosters the overall process (Borgatti & Foster, 2003).

According to Selnes & Sallis (2003), collaborative partners can develop their joint-learning activities in three ways. According to their article, facilitated information exchange process, development of mutual learning venues and the harmonisation of behaviour all affect the quality of joint-learning activities.

According to Dyer & Singh (1998), information exchange process is dependent on the partnering companies' learning capacity and knowledge sharing dexterity, as they determine how much valuable data companies can gain from their relationship. A mutual learning arena, in turn provides fertile conditions for a knowledge sharing process, whereas harmonisation of behaviour leads to a precise information exchange between companies.

Inter-organisational relationship requires continuous control and one way to ensure the efficiency is through effective governance. According to Blois (2002), a variety of governance forms exists today, but they are all used for the same purpose. For example, Macneil (2000) sees that a governance mechanism is needed, in order to effectively control the actions undertaken between parties. According to an article of Heide & Stump (2005) there seems to be a causal relationship between operational performance and effective governance. In the following sub-chapter this paper will focus on the factors that facilitate the improvement of relationship performance.

### 2.3 Facilitators of relationship performance and relationship quality

Business relationship researchers have lately focused on the factors that improve relationship performance. According to Kohtamäki et al., (2012), it is a pivotal issue to understand and analyse these factors, as they increase the probability that collaborative relationships will be successful. One could argue that factors such as trust, commitment, collaborative culture, specific objectives, relationship structure, flexibility and reciprocity explain various relational outcomes, but do they really do so?

The existing literature offers a wide range of relational mediators as Palmatier et al., (2006) put it. However, there is no consensus among researchers about which factors influence the relationship performance the most. According to Kohtamäki et al., (2012), relationship structure does not directly improve relationship performance, whereas relationship-specific investments and relational capital do. Nevertheless, several researches have proved that relationship structure affects the relationship performance indirectly. For example, Adler (1999) has argued that relationship structure facilitates the learning process and promotes innovativeness, which in turn affects positively to overall performance. Hence, the effect is indirect but equally important.

Trust in turn can be seen as a common mode, where collaborative companies' believe in each other's ability to execute previously agreed actions properly. According to Chowdhury (2005), two distinct forms of trust can be named: affective and causal. Affective trust represents emotion-based trust relationships, whereas causal trust is a



competency-based trust form. This is an important finding, as it verifies the fact that emotional bonds matter. According to Ivens (2004), mutuality and integrity are the main building blocks of trust, but in isolation the effect is less pronounced.

A considerable amount of literature sees that a high trust level between partners typically improves the partnership's quality, which in turn improves the performance. According to Morgan & Hunt (1994), trust is the most essential variable in a business relationship. Pinto, Slevin & English (2009) agree with this argument by stating that trust is the most critical component of a collaborative partnership, as it reinforces the relationship. In addition, Dyer & Singh (1998) see trust as the strongest governance mechanism when building effective inter-organisational business relationships. According to Huikkola et al., (2013), parties that trust in each other, are able to share strategically important knowledge and intensify their collaboration.

Researchers have also highlighted the importance of nurturing trust across organisational boundaries. According to Johnston et al., (2004), high trust levels between partners seem to be a basic prerequisite for an efficient supply chain partnership. One cannot stress enough the importance of trust, as it helps to overcome the problems, as Pinto et al. (2009) put it. According to them, a high trust-level also fosters the probability of cost savings as the need for supporting activities decreases. However, Selnes & Sallis (2003) remind that excessive trust can have its' drawbacks.

Managers typically see relational trust as a facilitative factor in a collaborative relationship, but under some circumstances a high trust level might actually reflect negatively to the overall performance. According to Selnes & Sallis (2003), high trust levels might drive collaborative companies to a situation where they no longer question each other's actions, which in turn decreases partnership's operational quality and hence, the performance. However, companies can systematically improve reciprocal communication and thus, prevent the negative effects of high trust.

Researchers have also found evidence that high trust levels between partnering companies increase the likelihood of a long-term relationship. According to Ballantyne et al., (2011), reciprocal value proposition plays a key role in trust formation, as met expectations create a fertile ground for future collaboration. In addition, trust formation seems to be partially

a time-sensitive process, as argued by Gulati & Sytch (2008) who proved that familiarity creates trust.

Literature sees commitment as another key variable. According to Morgan & Hunt (1994), commitment expresses the degree in which organisations are committed to the on-going relationship. When companies believe their relationships are valuable, they will likely invest significantly more towards the relationship, which in turn enhances the relationship's stability. Hence, it is no wonder that for example, Kamarul & Raida (2003) see commitment as the driving force behind organisation's performance. Researches have also found a link between investments and relationship duration; extensive investments support the probability that long-term relationship will be formed.

Several researchers such as Rose, Kumar & Pak (2009) have found that organisational learning fosters commitment, as collaborative learning activities enhance the partners' capability to reach settled goals. The findings of Dyer & Singh (1998) are relatively similar, as they point out the causal relationship between collaborative learning activities and increased commitment. In addition, Selnes & Sallis (2003) have proved that high commitment levels affect positively towards an information exchange process. According to their article, commitment also indirectly promotes the creation of competitive advantage.

Numerous scholars have stressed that relational behavior forms such as: integrity, mutuality, flexibility and long-term orientation foster relationship quality. Some researchers, such as Morgan & Hunt (1994), have gone one step further by arguing that the partner's capability to pursue these elements lays the foundation for quality improvements. The following paragraph will focus more deeply on different relational behavior forms.

One of the most common forms of relational behavior is flexibility. Several definitions for flexibility exist, which all stress the importance of adaptability. According to Ivens (2004), flexibility is a synonym for collaborators readiness to adapt to the changes that may occur during the relationship. In other words, Ivens (2004) believes that business relationships are exposed to environmental changes, which in turn lead to a situation where parties are no longer capable to operate according to predefined conditions. Hence,

partnering firms need to be flexible and approve potential changes. If the degree of flexibility is high, collaboration is likely to continue in accordance with new terms.

Another important variable is integrity, which according to Ivens (2004) improves satisfaction and trust among partners. Collaborative parties set certain expectations towards each other in the construction phase by agreeing to operate in accordance with the contract. According to Ivens (2004), an ideal situation is achieved when partners comply with the pre-defined terms and conditions. In this case parties feel that their partnership is valuable and worth investing, which in turn increases the amount of satisfaction and trust between the partnering sides.

A long-term oriented partner is an important asset for any company. However, Ivens (2004) argues that a long-term relationship requires specific investments that decrease the number of potential partners. Ivens (2004) also argues that termination of a long-term partnership is a relatively expensive process, as companies have to find a new partner and reconfigure activities. Hence, it is no wonder that many collaborative companies invest in the existing relationships.

One form of relational behaviour that has not yet been mentioned is mutuality. According to Dant & Schul (1992), mutuality levels increase when partners understand that there is a causal relationship between common success and own success. Hence, mutuality can be seen as a common understanding about the importance of overall success. In addition, Ivens (2004) sees that high mutuality levels guarantee that parties will not just maximise their profits at the expense of each other, resulting in a significant positive impact on the partnership's trust level.

Based on the literature, there seems to be a relatively logical chain of functions that explain why companies tend to favour certain relationships over others. Companies collaborate in order to gain competitive advantage over competitors, even though the nature of the competitive advantage differs. Companies seem to choose a collaboration form that ideally serves their purposes and emphasize the partnering companies' ability to provide additional value for the partnership. The more valuable the partner is, the more willing the company is to invest in the relationship.

Partnership quality in turn consists of a number of factors. For example; mutual resources, high trust level, efficient knowledge sharing process, relational behavior forms and risk mitigation affect directly the quality and fruitfulness of a partnership. Thus, one can appoint them as partnership's building blocks. In addition, researchers are relatively unanimous that partnering firm's satisfaction to a relationship principally defines whether conditions for a long-term relationship exist.

## 2.4 Relational concepts

This chapter investigates how relations shape business practices, by reviewing the literature and numerous relational concepts. In order to ensure that the reader understands the key concepts, a table is compiled where all the most common relational terms have been defined more accurately (Table 1). The defined terms are: inter-organisational relationship, partnership, cooperation, collaboration, network, alliance, knowledge sharing, value co-creation, integration, interaction, commitment, trust and social capital. First, each concept will be reviewed in detail, after which the findings will be presented in a table. Hence, the reader has the possibility to either read the whole chapter or view concept definitions directly from the table.

According to Ford & McDowell (1999), inter-organisational relationship is a reciprocal relationship where value is co-created. Dyer & Singh (1998) argue that deep inter-organisational relationships have proven to create value for the parties involved. IORs appear in many forms, such as partnership, alliance and network, which are all forms of inter-organisational relationship.

The most common definition for partnership is the one that the Audit Commission (1998) made; an agreement between two or more independent bodies to work collectively to achieve an objective. Network, on the other hand, can be seen as a set of collaborative organisations. According to Huikkola et al., (2013), at least three organisations are needed to form a network. An alliance is a relatively similar partnership form as a network, the

difference being, that an alliance means joining of resources for a purpose, while network focuses merely on common functions.

Collaboration and cooperation are relatively similar terms illustrated by Osarenkhoe (2010), who argues that in both processes collaborative companies interact through the sharing of complementary capabilities or knowledge, and leverage these for the purpose of mutual benefit. However, collaboration requires more effort from the partnering sides as the collaborative relationship builds on the continuous teamwork. Hence, it is no wonder that collaboration often leads to a higher outcome than cooperation.

Certain actions such as interaction, integration and knowledge sharing typically foster inter-organisational relationship. According to Swart & Harvey (2011), knowledge sharing is the process where individuals mutually exchange both tacit and explicit knowledge and jointly create new knowledge. Ballantyne & Varey (2011), state that an effective knowledge sharing process among participating companies also fosters organisational learning, as companies learn from each other, as well as develop new knowledge.

Integration in turn is an essential function in project management. According to Petkovic & Lazarevic (2012), integration of resources, knowledge and competencies has a positive effect on relationship efficiency. Hence, it can be seen as a key precondition for a successful partnership, as it increases the possibility that the partnership's goals will be achieved. Interaction in turn is also a reciprocal process where two or more companies have effect upon one another.

Commitment and trust are both important relational concepts. According to Pinto et al., (2009), trust is a critical element for building and maintaining a healthy and cooperative partnership. Some researchers, such as Rousseau et al., (2009) see trust as a psychological state that is predisposed to changes. Positive partnering experiences increase the trust level, whereas negative experiences have the opposite effect. Commitment has a relatively similar effect to the relationship as trust has where it reinforces the mutuality of the parties. According to Li et al., (2001), a high commitment level also increases the parties' cohesiveness to confront the rivals.

The last relational concept of the following table is social capital. The central premise of social capital is that social networks have value. Hence, it is no wonder that Nahapiet & Ghoshal (1997) argue that social capital is a productive resource that facilitates companies' value creation activities. According to Nahapiet (2008), companies that are better able to access and benefit from a range of opportunities and resources typically have higher social capital capacity than their competitors.

This paper has now presented the most important relational concepts, which are summarised in Table 1 below. Henceforth, the reader can familiarise with the relational concepts according to their needs. All the references have been placed in the right column so the reader will always know which author has drawn the definition. It is important to remember that all the following definitions are gathered from articles analysed. Hence, some definitions might be somewhat industry centric definitions, as the article has focused on some certain industry.

**Table 1.** Relational concepts

Term	Definition	References
Inter-organisational relationship	Reciprocal relationship where value is co-created	Ford & McDowell (1999)
	Dyadic or multiple relationship	Yami & Nemeah (2014)
	Relationship where partners are obligated to contribute towards common goals	Lambert & Enz (2012)
	Relationship that provides additional value for the participating organisations	Dyer & Singh (1998)
Partnership	Mechanism for developing relationship so as to improve inter-organisational relations.	Li, Cheng, Love & Irani (2001)
	An agreement between two or more independent bodies to work collectively to achieve an objective	Audit Commission (1998)
	Source of competitive advantage	Katzy & Crowston (2008)
	Basis for achieving win-win situation	Chen & Chen (2007)

Cooperation	<p>Inter-organisational cooperation is an effective way to gain additional value</p> <p>Cooperation can be organised in several different ways (e.g. subcontracting, consortium, strategic alliance, joint venture)</p>	<p>Kim, Park, Ryoo, Park (2010)</p> <p>Bosch-Sijtsema &amp; Postma (2009)</p>
Collaboration	<p>Cooperative arrangement in which two or more parties work jointly towards a common goal.</p> <p>Working together for common interest</p> <p>Form of interaction</p> <p>Mainstay of efficiency improvements</p>	<p>Ford &amp; McDowell (1999)</p> <p>Slater (1998)</p> <p>Zamanzadeh (2014)</p> <p>Fulford &amp; Standing (2014)</p>
Network	<p>A set of collaborative organisations</p> <p>Collaborative working arrangement</p> <p>Source of competitive advantage</p> <p>At least three organisations are needed to form a network.</p>	<p>Jenssen &amp; Nybakk (2013)</p> <p>Slater (1998)</p> <p>Katzy &amp; Crowston (2008)</p> <p>Huikkola, Ylimäki, Kohtamäki (2013)</p>
Alliance	<p>A close, collaborative relationship between two, or more, firms, with the intent of accomplishing mutually compatible goals that would be difficult for each to accomplish alone</p> <p>Firms may enter into an alliance either with a promotion or a prevention mind set and this can be consequential for alliance development</p>	<p>Cameron (2007)</p> <p>Kumar &amp; Nathwani (2012)</p>
Knowledge sharing	<p>Knowledge sharing is the process where individuals mutually exchange both tacit and explicit knowledge and jointly create new knowledge</p> <p>Process that fosters organisational learning</p>	<p>Swart &amp; Harvey (2011)</p> <p>Ballantyne &amp; Varey (2011)</p>
Value co-creation	<p>Social and economic process where participative companies are obligated to contribute towards common goals</p>	<p>Lambert &amp; Enz (2012)</p>

	Partnering companies' continuous investments have positive effect on value creation	Liker & Choi (2004)
Integration	Essential function in project management  Partner integration refers to the degree to which the firm actively engages in coordinating activities and strategies	Baccarini (1996)  Bonner, Kim & Cavusgil (2004)
Interaction	Regular patterns of inter-firm interaction  Regular collocated practices among organizations during a joint-knowledge creation effort.	Dyer & Singh (1998)  Berente, Baxter & Lyytinen (2010)
Commitment	Long-term commitment reinforces mutuality of the parties and increases cohesiveness to confront the rivals  Goal commitment is defined as "one's attachment to or determination to reach a goal, regardless of the goal's origin.	Li, Cheng, Love & Irani (2001)  Korzaan & Tennessee (2009)
Trust	Trust is seen regularly acknowledged as a critical component for building and maintaining healthy, cooperative partnerships in projects  Trust is a psychological state comprising the intention to accept vulnerability based upon positive expectation of the intentions or behaviours of another	Pinto, Slevin & English (2009)  Rousseau, Sitkin, Burt & Camerer (2009)
Social capital	Social capital is composed of a variety of entities with two common characteristics: a) they all consists of some aspect of social structure, b) they facilitate certain actions of actors (individuals or firms) in this structure  Three different forms: Obligations, expectations and trust-value of social relations, channels of information and norms and sanctions	Coleman (1998)  Yami & Nemeah (2014)



### 3. RESEARCH METHODS

Previous studies have researched inter-organisational relations from many perspectives and advanced several methods. Despite the strong theoretical base, it was possible to find a research gap in the organisational relationship literature, as inter-organisational relations in project business had got relatively little attention among the existing literature. By identifying what kind of impact relational behavior has on project business performance, this paper will offer some important additions to the current literature. In the following chapters, this paper will familiarise the reader with the research process by proceeding in a logical order from start to finish.

Systematic literature review was a logical method of choice, as the purpose was to focus on certain high-quality journals and investigate the topic with strict criteria parameters. One particular research question guided the process: *What kind of relational aspects and business practices project business relationships encompass and how are these relational aspects connected to a business or project performance?*

In order to answer this research question, it was necessary to find a comprehensive set of articles and analyse them thoroughly. Thus, it was logical to choose a research method that combined the best aspects of qualitative and quantitative methods. The research was simultaneously descriptive and explanatory, as it did not only describe the causal mechanism between inter-firm actions and the outcome, but also explained how the causal mechanism actually functioned.

Referring to an empirical research that relates to the earlier researches in the project business area, it was possible to review relational aspects in a project environment very diversely. All in all this research took a closer look into thirty-five articles. A diverse variety of industries from electricity production to construction industries were represented. The article review revealed that there are certain differences between industries when it comes to companies' value proposition intentions, but these differences will be covered more comprehensively in the following chapters.

### 3.1. Data collection process

The data used in this thesis has been collected from the SciVerse Scopus, an academic database. Scopus was a logical choice as its' massive data library guaranteed that all the relevant articles concerning inter-firm collaboration could be taken into account. Articles were sought on the basis of their title, abstract and keywords by using several keyword combinations.

The following table (Table 2) summarises the findings per keyword combination. Even though the number of articles is relatively high, the following results include only peer-reviewed articles. The Scopus search system does not allow the use of very precise searches, which is why many of the results turned out to be irrelevant. On more detailed examination, only thirty-five articles met all the criteria. The criteria will be presented in the following paragraph.

**Table 2.** Search results (project management/project business)

<b>Keyword</b>	<b>Relational word</b>	<b>Number of articles</b>
Project management	Network	339
Project management	Integration	229
Project management	Interaction	193
Project management	Collaboration	141
Project management	Partnership	133
Project management	Cooperation	124
Project management	Commitment	122
Project management	Trust	117
Project management	Knowledge sharing	101
Project management	Alliance	68
Project management	Social capital	24
Project management	Inter-organizational relationship	20
Project management	Boundary spanning	12

Based on the extensive number of articles, it was necessary to narrow the scope of the research in order to get a high quality and coherent sample. The first criterion was to accept only peer-reviewed articles that were published in admitted journals. Hence, it was possible to systematically discard low-level articles and thus, improve the research quality. As a result of this elimination process, more than eighty-five per cent of the

articles were excluded from the actual research. It was surprising how many of the articles were published in journals that did not have a relatively high journal ranking.

As it was still necessary to set other limiters too, two additional criteria were settled. The second criterion was to involve only those articles that focused on inter-company relationships, hence, for example, articles that dealt with institutional partnerships were systematically excluded from the research. The third and final criterion was to accept only those articles that focused on project business. By doing so, we managed to guarantee that articles that proceeded to an analysis phase fitted the purposes of this research.

Due to the lack of automatic ways to analyse articles' content, all articles had to be reviewed manually. Over two thousand articles went through the evaluation stage and after a careful analysing process only thirty-five of them met all the settled criteria and proceeded to a final analysis. In the next sub-chapter, this paper will dig into actual article analysis by presenting the process flow.

### 3.2. Description of article analysis process

Researchers have pointed out certain connections between relational behaviour and performance and additionally identified factors that promote relational behaviour. On the basis of these findings, they have been able to form certain causal chains. One example of a causal chain could be the following: a high trust level between partners leads to an open knowledge sharing process which promotes project efficiency.

The selected thirty-five research articles were analysed by a multi-stage research process. At the first phase, relational aspects of selected articles were analysed more specifically. One by one, the articles were evaluated on how reliable the findings presented in the article were. It was possible to start drawing a causal map about the emerging linkages between antecedents for relational aspects as well as between the relational aspects and performance.

Reliability of the article findings was assessed using a five-step model. The most reliable findings were compiled with code AA (findings that were based on empirical data analysis). Findings, which contents were not empirically investigated in a focal article, but the author(s) referred to other researchers or even mentioned a connection of relationality with either its antecedent or outcome more or less speculatively, were compiled with code BA or BB. All the five following categories then describe the validity of these findings.

AA: Empirical result which is verified by large data and statistical tests

AB: Empirical result which is verified by case examples

AC: A model or framework, which is based on prior literature, but doesn't have any own empirical data.

BA: Other researchers have verified a relational finding, but the research itself has not proved the finding.

BB: Some sort of causality mentioned in the text that does not refer to any research

It was necessary to focus on the reliability aspect, as it helped to distinguish articles, in which the relational finding was based on actual research from the articles merely based on assumptions. This was important, because in this thesis some of the articles were analysed down to a very detailed level and it was reasonable to focus specifically on the findings that had the highest reliability degree. On the other hand it was also interesting to know, how well the findings presented in the articles were in line with the actual research in a general level.

Reliability degree analysis was however just the initial stage of the more detailed article analysis. All the thirty-five articles went through a multi-stage research process and after the reliability of the articles had been assessed it was time for the more detailed analysis. All the thirty-five articles were once again analysed in order to identify what kind of causal relationships between relational aspects the authors had found in their research.

Based on the analysis, it was possible to start drawing a causal map. The causal map was divided into three cells, as the aim was to illustrate causalities found in the literature.

Those relational concepts that described either contextualizing the relational behaviour, or expressed factors that act as antecedents for relational behavior, were placed in the first cell. The second cell contains concepts that expressed relational behavior. In the third cell are those concepts that were either a direct or indirect result of specific relational action. The causal map visualises the research results in an easily interpretable format and was thus purposeful.

In the first level, we explained roof-concepts and described what kind of content the different cells of the causal map contains. In the second tier, the focus is on certain causal chains. Hence, one can see the first tier as an initialisation for the more detailed analysis. At the first level, the reader is familiarised with the concepts and receives an overview about the research results, while in the second part, the reader gets the possibility to focus on details.

Altogether, based on the sample size and quality, one can say that the research process was comprehensive. In the first phase the research included hundreds of articles. Due to the criteria based elimination process, many articles were excluded and as a result of this process, only thirty-five most suitable, high-quality articles entered the analysis phase. The decision to accept only peer-reviewed articles was well reasoned, as it increased research quality.

The selected research strategy was a demanding and time-consuming way to execute a research, but it was simultaneously the only way to guarantee that all the suitable articles were included. The most critical phase of this research was however the analysing phase, as in this phase the actual data went under review. All the selected thirty-five articles went through the same review process that intensified the compilation of statistics and promoted thesis quality. The next chapter of this paper will assess the validity and reliability degree of this thesis.

### 3.3. Reliability and validity

Before this paper will assess the validity and reliability of this research, it is necessary to define these two terms that are often seen as fundamental cornerstones of any research. A high reliability degree means that other researchers can reproduce exactly the same

experiment, under the same conditions and still generate the same results. Reliability alone is not sufficient, so validity is needed as well. Validity expresses how well the study measures that which it is purported to measure.

Based on the fact that the study met the research objective, one can argue that the validity degree of the thesis is relatively high. In addition, the study found a precise answer to the research question, which is an important criterion when evaluating validity. However, it is important to remember that a peer-review process would be needed in order to confirm the validity of this research. On the other hand, when assessing thesis reliability, repeatability can be concerned as a main determining factor. The fact that other researchers have a possibility to repeat the research so that they will get similar results increases the reliability of this thesis. Based on the fact that the findings have been derived straight from article findings, there is no possibility for interpreting, which in turn unifies the findings.

## 4. RESULTS

This chapter presents the results of the article analysis and has been organised so that it presents the findings in a logical order proceeding from the general findings to the more specific ones. Hence, the reader will understand the overall picture, before entering into the details. The findings of this thesis will provide important insights into the current literature.

It is important to note that the research did not only focus on the articles' content, as it was also interesting to know whether actual research supported presented relational findings. Hence, four different categories were created with a specific code for each. The most reliable findings were compiled with code AA (findings that were based on empirical data analysis), whereas findings whose content were not empirically investigated in a focal article, but the author(s) referred to other researchers or even mentioned a connection of relationality with either its antecedent or outcome more or less speculatively were compiled with code BA or BB. The following table (Table 3) presents the results of articles' reliability analysis.

**Table 3.** Results of the articles' reliability analysis.

Code/Explanation	Project business
<b>AA:</b> Empirical result which is verified by large data and statistical tests	3
<b>AB:</b> Empirical result which is verified by case examples	15
<b>AC:</b> A model or framework, which is based on prior literature. No own empirical data	4
<b>BA:</b> Other researchers have verified a relational finding, but research itself does not prove the finding	4
<b>BB:</b> Some sort of causality mentioned in the text that does not refer to any research	8

Based on the analysis, one can say that the previous studies do not often support relational findings that other authors have found in their articles. This is concluded, as other researchers have been validated in only twelve per cent of the presented article findings. In addition, four articles presented relational findings based only on previous findings. In

other words, in these articles, the author(s) did not prove the findings they presented in any way.

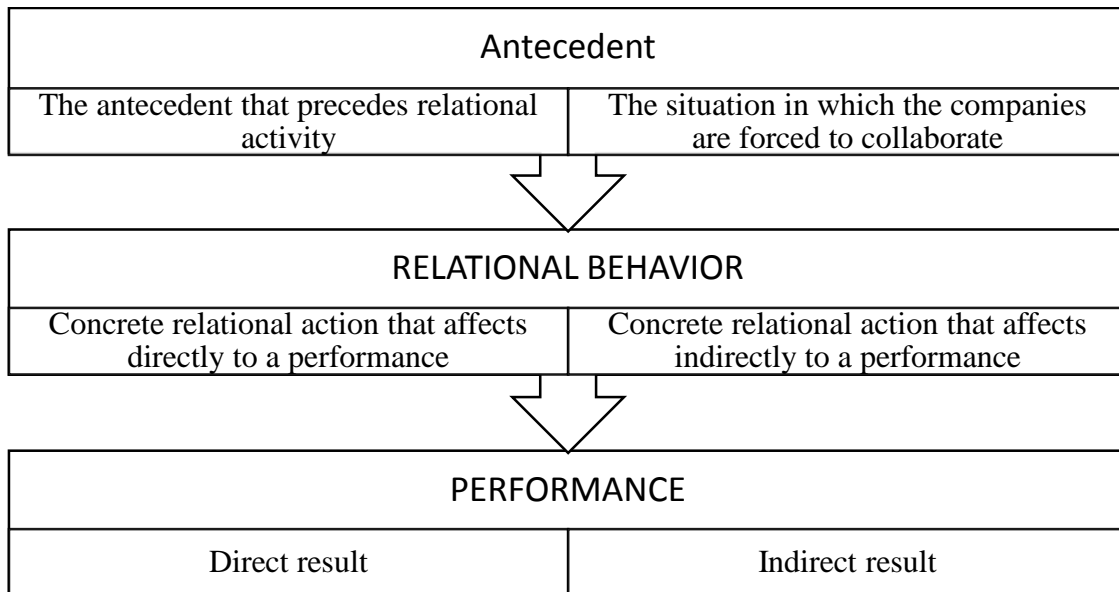
Based on the results, one can argue that inter-organisational relations research in project business needs more high-quality studies, as currently the level of the articles is relatively variegated. It is also important to note that case studies seem to be a significantly over-represented study form compared to others. However, as case study is likely the easiest way to research inter-organisational relationships, one can understand why the amount of case studies is as high as it is.

During the following chapters this paper will present the results of the article analysis more deeply. The results will first be presented in a general level followed by a more detailed analysis. The first part contains three tables, each describing a single entity. Firstly, this paper will focus on preliminary factors; factors that are some sort of prerequisite for relational behavior. Secondly, this paper will deal with relational behavior forms and, thirdly, point out what kind of outcomes relational actions have.

The second part of the analysis will then deal with causalities by analysing certain causal chains between preliminary factors, relational behavior and performance. Hence, the reader will understand the impact that relational action has on performance. The following figure (Figure 1) ensures that the reader understands the causality aspect and its dimensions before proceeding beneath the surface.

**Figure 1.** An overall picture of the causal relationship between antecedent, relational behavior and performance.





#### 4.1. Contextual factors and antecedents for relational behavior

The antecedent is the starting point for relational behavior. One can roughly divide it into factors that at some level force companies to collaborate and factors that foster the probability of relational action. According to Walker & Johannes (2003), a demanding environment forces companies towards inter-organisational relationships, as they would not have capacity to cope on their own. Hence, one can see a demanding environment as a starting point for the formation of IOR's.

However, most inter-firm relationships are relationships where participating companies simply believe that they will gain additional value from their relationship, rather than relationships where participating companies truly focus on the common interest. In these cases, additional value is the reason for entering, rather than inability to compete alone. Companies might also have previous history of working with the other party. According to Lahdenperä (2010), earlier business relationship improves the probability for future collaboration.

The following table (Table 4) summarises the findings of the analysis in an easily interpretable format. It has been organised so that initialising factors have been divided

into four subcategories based on their nature. The reader will hence view the terms in the right context, which enhances the thesis' readability.

**Table 4.** Antecedents

Category	Initial factors	Explanation	References
Environmental factors	Demanding environment	Demanding environment forces companies to collaborate	Walker & Johannes (2003) Crespin-Mazet & Ghauri (2007)
Network context	Joint venture, collaborative project, IOR, project network, supply network, strategic community, cooperative R&D project	Network is the enabler of relational actions	Walker & Johannes (2003), Calamel, Defelix, Picq & Retour (2012), Ahola, Kujala, Laaksonen & Aaltonen (2013), Katzy & Crowston (2008), Young, Haas, Goodrum & Caldas (2011), Kadama (2002), Enberg (2012)
Firm characteristics	Project based firm, SMEs, large company	Firm's type guides it towards certain relational action(s).	Park, Han, Rojas, Son & Jung (2011), Bosch-Sijtsema & Postma (2009)
Antecedent	Partner's dependency on each other's, cultural mechanism, mutual trust	Previous history creates conditions for relational behavior	Lahdenperä (2010), Vilana & Rodríguez-Monroy (2010), Fellows & Liu (2012), Pinto, Slevin & English (2009)

A closer look reveals that certain factors foster the probability for relational behavior. Network, for example, provides a solid ground for the upcoming relational activities and is thus, primarily a driving force. For example, Ahola et al., (2013) have highlighted this issue by arguing that inter-organisational relationship is a starting point which should be developed actively in order to reach settled goals. According to Kadama (2002), formation of a network is the first step followed by a series of actions from value-harmonization to merging of competencies.

On the other hand, the companies size or nature might also impact its' motives to collaborate. According to Park et al., (2011), large companies aim to form large and dense networks, whereas small and medium size companies favor long-term relationships with a limited number of partners. It is however important to remember that Park et al., (2011) have made generalizations, as for example that large companies don't intentionally build complex network system.

The third category, environmental factors, is also an important theme. Two of the analyzed articles dealt with the environmental impact, and in both of these articles authors saw that a demanding environment forces companies into collaborative actions. For example, Walker & Johannes (2003) argued that companies in the construction industry operate in a very competitive sector that forces them to form inter-organisational relationships in order to remain competitive. Crespin-Mazet & Ghauri (2007) share this opinion, as they see that the challenging nature of today's projects has made collaboration an attractive alternative.

In some situations partnering companies might be dependent on each other. According to Fellows & Liu (2012), a strong interdependence degree typically correlates with the collaboration's quality, as participative companies invest in the relationship more than usual. In other words, mutual dependency is the driving force for relational actions. According to Vilana & Rodriguez-Monroy (2010), one should see cultural mechanisms as an antecedent for relational behavior, as it greatly influences to the formation and survival of inter-organisational relationship.

One can see the initial factors as preceding factors for the actual relational behavior, as they either force companies into collaborative actions or act as the driving force. This is an interesting finding as it points out that certain preceding factors lead companies towards relational actions.

The following chapter will deal with relational actions that largely determine how beneficial the inter-organisational relationship will be for its participants. Before entering into the new chapter, it is necessary for the reader to understand that some relational actions affect the performance directly, whereas some have only an indirect effect. Hence,

relational behavior can be a synonym for several activities from risk sharing to knowledge base alignment.

#### 4.2. Relational behavior in project business area

This chapter continues presenting the results of the article analysis by focusing on relational behavior in project business area. Relational behavior can be seen as a synonym for relational action. Relational behavior is either dyadic or multiple by its nature, and the focus is on the intercompany interaction. Information pooling, risk sharing and cooperative benchmarking are all examples of relational behavior. One characteristic of relational behavior is that it typically generates mutual benefits for the participative companies. Hence, relational behavior often strengthens the existing inter-firm relationship.

Relational behavior can be hypothesized to influence various outcomes. Leuthesser & Kohli (1995) agree with the previous argument by stating that several relational actions have a significant influence on the outcome, but the effectiveness varies. All in all, researchers seem to be relatively unanimous about the connection between relational behavior and performance, as various researchers have identified causalities between relational actions and the outcomes. For example, Sutter and Wagner (2012) found that certain factors such as complementary relationship-specific investments and high integration level typically lead to a higher performance. In addition, Pinto et al. (2009) empirically proved that a high integrity trust level has a significant direct effect on the project's success.

In this research, relational behavior forms have been divided into seven categories that are: interaction, partnering, network/relationship development, learning/knowledge development, integration, alignment and coordination. Hence, the reader will get a good overall picture of the topic and understand how broad of a concept relational behavior actually is. The results of the analysis are presented in the table below (Table 5).

**Table 5.** Relational behavior forms

Category	Relational behavior forms	Explanation	References
Interaction	Sustainability assessment process, co-operative procurement procedures, co-operation, collaborative development activities, co-operative benchmarking, physical interaction competency rallying, network sensing	Terms that clarify interaction's nature. Interaction leads then to a certain outcome.	Wikström, Artto, Kujala & Söderlund (2010), Lahdenperä (2010), Mathur; Price & Austin (2008), Bosch-Sijtsema & Postma (2010), Calamel, Defelix, Picq, Retour (2012), Pesämaa, Eriksson, Hair (2009), Wagner & Sutter (2012), Li, Cheng, Love & Irani (2001), Katzy & Crowston (2008), Berente, Baxter & Lyytinen (2010), Fellows & Liu (2012)
Partnering	Coopetition, Partnership	Specified IOR's where interaction occurs	Yami & Nemeh (2014), Chen & Chen (2007), Li, Cheng, Love & Irani (2001)
Network/ relationship development	Partnering components, formation of a large and dense network of SMC's, formation of a network with limited number of LC partners, active development of IOR's, formation or survival of IOR's	Relational behavior relates to the development of a network or relationship	Ahola, Kujala, Laaksonen & Aaltonen (2013), Vilana & Rodriguez-Monroy (2010), Park, Seung, Rojas, Son & Jung (2011)
Learning/ knowledge development	Information pooling, learning process, knowledge base alignment, co-development strategy, removal of barriers to change	Relational behavior such as information pooling enhances learning process	Calamel, Defelix, Picq & Retour (2012), Crespín-Mazet & Ghauri (2007), Berente, Baxter, Lyytinen (2010), Boddy, Cahill, Charles, Fraser-Kraus & Macbeth (1998), Pinto, Slevin & English (2009), Swart & Harvey (2011)
Integration	Partner integration, knowledge integration, integrated strategy, integration of automated location and tracking technology	Terms that clarify integration's nature.	Kadama (2002), Young, Haas, Goodrum & Caldas (2011), Bonner, Kim, Cavusgil (2005), Enberg (2012)
Alignment	Congruent objects, relational embeddedness, complementary capabilities, common understanding of the process	Terms expressing the compatibility degree of companies. The more fit, the better.	Bosch-Sijtsema & Postma (2010), Berente, Baxter & Lyytinen (2010), Bonner, Kim, Cavusgil (2005), Enberg (2012)
Coordination	Shared responsibility, stakeholder engagement, task sequence alignment, systemic innovation misalignment, risk sharing	Terms expressing coordination as a form of relational behavior	Lahdenperä (2010), Seshadri (2013), Alin, Maunula, Taylor & Smeds (2013), Mathur, Price & Austin (2009)

Based on the analysis, it can be said that relational behavior forms significantly differ from each other. For example, risk sharing and information pooling are relatively different activities that suit different situations. Companies whose aim is to mitigate risk might find risk sharing as an optional relational activity, whereas companies whose purpose is to enhance innovativeness might see information pooling as a useful method. Due to the differences, such as the above-mentioned, it was well reasoned to sort certain concepts in their own categories.

One of these categories was interaction that seals in certain concepts such as collaborative development activities, co-operative benchmarking, competency rallying and network sensing. One can say, that all the above-mentioned terms describe, in their own way, the interaction's nature. According to Wagner & Sutter (2012), collaborative development activities have a positive impact on project performance. Their argument makes sense as for example; relationship-specific investment increases relationship's value, which again reflects to the overall performance.

Another example of the collaborative process is competency rallying. According to Katzy & Crowston (2008), competency rallying has four phases: 1) identification and development of competencies, 2) identification and facing of market opportunities, 3) marshalling of competencies, and 4) short-term cooperative effort for technological innovation and commercialization. A closer look reveals that all the four phases require interaction between participative parties. One could say that interaction's quality largely determines how successful process the competency rallying will be, as lack of interaction would likely slow down the process.

On the other hand relational behavior can also refer to collaboration in general, in which case, partnership itself is the form of relational activity. Partnership has many forms such as coepetition and collaboration. According to Yami & Nemeh (2014), coepetition is a relational activity in which competing companies collaborate for mutual benefit. Hence, one can see coepetition as a form of relational behavior that leads to a particular outcome. It is important for the reader to understand that relational behavior is a comprehensive expression for several relatively different concepts.

During the literature review, several relational actions that can be seen as development activities were identified. Active development of inter-organisational relationship, formation or survival of IORs and formation of a large and dense network of small and medium size companies are all relational behavior forms representing development will. According to Ahola et al., (2013), active development of a project based firm increases its effectiveness, as capability enhances. In addition, a possibility to develop relationships in the future builds trust, as Vilana & Rodriquez-Monroy (2010) put it.

On the other hand, it seems that companies have relatively different methods for the development of IORs, as some collaborate with several partners, whereas some focus on only a few key relationships. According to Park et al., (2011), the companies' size defines what kind of network suits its purposes the best, as large companies tend to form comprehensive networks, whereas small and medium size enterprises favour more targeted relationships. However, both network formation styles require relational activities from the participating parties and one can talk about relational behavior.

Also identifiable from the articles was certain relational behavior forms that have positive impact on the knowledge creation process such as: information pooling, removal of barriers to change and knowledge base alignment. According to Berente, Baxter & Lyytinen (2010), the information pooling process connects participative organisations' data warehouses. Hence, participating companies have more know-how on how to meet the project's needs. Knowledge base alignment is a relatively similar process, the difference being that collaborating parties partially retain their own data.

On the other hand it is also necessary to secure the information flow among the participants. According to Boddy et al., (1998), certain barriers prevent organisations from implementing something, which would probably enhance their business performance. For example, flow of information between participants is necessary to support closer cooperation with the partners. Hence, one can see information breaks as barriers for closer cooperation.

The analysis also dealt with integration-based relational behavior forms, which have significant similarities with relational knowledge creation actions. Relational behavior

forms such as partner integration, integrated strategy and integration of automated location and tracking technology were all placed under the category of integration, as they represented merging actions. It is noteworthy that in several research articles, such as Bonner, Kim & Cavusgil (2005) and Kadama (2002), authors have found a connection between integration activities and performance. More precisely, authors have empirically proven that integration activity typically fosters performance.

One category that has not been mentioned yet is called fit. Terms under this category; congruent objects, relational embeddedness, complementary capabilities and common understanding of the processes, all represent certain relational activities where partnering companies harmonise their joint-activities on some level. According to Berente, Baxter & Lyytinen (2010), partners that unify their object typically perform better than partners that have incongruent objects. Relational embeddedness seems to have a similar effect, as Bonner, Kim & Cavusgil (2005) argue that relational embeddedness leads to a strong network identity, which in turn affects positively to market performance.

One can also see fit-category concepts as enabling relational behavior forms. According to Enberg (2012), shared understanding of the process promotes knowledge integration between companies, as companies´ have common understanding of the knowledge sharing methods. On the other hand one can also see complementary capabilities as a resource that helps partners in achieving the actual objective. According to Bosch-Sijtsema & Postma (2009), an inter-organisational relationship, which utilizes complementary capabilities, will more likely be able to innovate and success.

The last category of relational behavior forms is coordination, which focuses on certain relational actions that either controls the joint-project itself or its risks. Activities such as shared responsibility, risk sharing model and stakeholder engagement are clearly aimed at preventing risk, whereas task sequence alignment and systemic innovation misalignment are coordination activities whose purpose is to enhance processes.

According to Seshadri (2013), shared responsibility reduces the financial risk that partnering companies´ take, as they are not solely responsible of the project and its success. On the other hand, stakeholder engagement can also be seen as a way to reduce



risk. According to Vivek, Price & Austin (2008), stakeholder engagement prevents conflicts, which in turn reduces risk, as conflicts typically have a negative impact on project performance. All these risk sharing activities can be seen as coordinative actions to control the project's performance.

Task sequence alignment and systemic innovation misalignment in turn are ways to coordinate the process. According to Alin et al., (2013), effective coordination of processes provides a joint-project an opportunity to systematically enhance its efficiency. However, it is important to remember that inter-firm process is more complicated than a single firm's internal process. Hence, jointly operating companies should put more effort into coordinative activities in order to operate effectively.

This paper has now presented the relational behavior forms that occurred in the analysis phase by focusing on their operating logic. It is noteworthy how many various types of relational activities emerged from the analysis. Despite the differences, it was still possible to find a common denominator, as all relational activities developed the relationship to some extent. Many relational activities have direct impact on performance, but there are also indirectly affecting actions. In these situations, relational action primarily improves the relationships' quality. The next chapter will focus on the outcomes that relational actions have. Hence, the reader will get an overall picture about the effectiveness of relational actions.

#### 4.3. Outcomes of relational activities

The purpose of this chapter is to amplify the reader's understanding of the outcomes that relational actions have. Based on the literature review the outcomes that relational actions have are divided into five subcategories: relationship quality, project outcomes, customer value, innovation and strategic position. Each category represents a certain type of outcome. Most outcomes were categorised under a relationship quality theme, even though improved project outcome was the most usual result of relational action. In addition, some actions improved relationship's innovativeness and some produced additional value for the customers.

As mentioned earlier, relational behavior affects the relationship either directly or indirectly. Although some researches have concentrated on secondary effects, most researchers have mainly investigated the relational actions' direct impacts. Hence, most of the outcomes presented in this chapter are direct consequences of relational activities rather than indirect ones. One should also remember that the effectiveness of relational actions varies, and one cannot say which actions have the greatest impact on performance.

The chapter has been organised so that it will present all the different outcomes in a logical order, beginning from the relationship quality. Secondly this chapter will deal with the direct project outcomes, moving then into the customer value category. Thirdly this chapter will investigate innovation outcomes from increased innovativeness to radical innovations, and finally focus on collaborative companies' positional changes inside their network.

After reading this chapter, the reader should have a comprehensive overall picture of the outcomes that relational actions have. It is necessary for the companies to understand what kind of relational action leads them towards the outcome they are trying to achieve. For example, companies that try to increase their relationship's innovativeness should cooperate closely and perhaps even have complementary capabilities as Bosch-Sijtsema et al., (2009) argue. The following table (Table 7) presents the findings of the article analysis.

**Table 6.** The outcomes of relational behavior

Category	Outcomes	Explanation	References
Relationship quality	Less conflicts, partnering excellence, improved quality of partnership, enhanced cooperation, enhances partnership, enhanced coordination, increased adaptability, increased flexibility, reduced boundaries, increased communication, systemic culture, enhanced knowledge creation process	Relationship quality covers the outcomes in which relational action has improved the quality of relationship.	Chen & Chen (2007), Li, Cheng, Love & Irani (2001), Pesämaa, Eriksson & Hair (2009), Wikström. Arto, Kujala & Söderlund (2010), Fellows & Liu (2012), Lahdenperä (2010), Vilana & Rodriguez-Monroy (2010), Berente, Baxter & Lyytinen (2010)

Project outcomes	Improved project outcome, properly executed change programme, enhanced sustainability	Outcomes in this category are direct results of relational actions.	Chen & Chen (2007), Wagner & Sutter (2012), Bonner, Kim & Cavusgil (2005), Park, Han, Rojas, Son & Jung (2011), Pinto, Slevin & English (2009), Alin, Maunula, Taylor & Smeds (2013), Boddy, Cahill, Charles, Fraser-Kraus & Macbeth (1998), Mathur, Price & Austin (2008), Seshadri (2013)
Customer value	Enhanced customer value, enhanced service package, high level customer solution	Outcomes in which customer value has been increased	Kadama (2002), Young, Haas, Goodrum & Caldas (2011), Walker & Johannes (2003), Katzy & Crowston (2008)
Innovation	Increased innovativeness, co-developed innovation, radical innovation, incremental innovation	Innovation outcomes	Bosch-Sijtsema & Postma (2009), Wagner & Sutter (2012), Yami & Nemeš (2014)
Strategic position	Strong relational position, strong functional position, strong strategic network identity	Relational action leads to an outcome, where collaborative companies have better position in their network.	Ahola, Kujala, Laaksonen & Aaltonen (2013), Bonner, Kim & Cavusgil (2005)

Based on the analysis, it seems that most relational actions have direct impact on the relationship's performance, as they either promote relationship quality or improve the project outcome. It is also noteworthy that partnering companies' ability to collaborate seems to have significant impact on performance, as a high-quality relationship feeds trust and commitment between the partners. The reader should also keep in mind that certain relational actions might affect various outcomes. For example, active development of inter-organisational relationship does not only impact the financial performance as the relationship's quality increases as well.

In the following chapters, this paper will deal with each outcome-category separately with the purpose to guarantee that the reader understands all the different outcomes that relational actions have. The relationship quality category includes the following outcomes: less conflicts, partnering excellence, improved quality of partnership, enhanced cooperation, enhanced partnership, enhanced coordination, increased adaptability, increased flexibility, reduced boundaries, increased communication and enhanced knowledge creation process.

Improved partnership quality, partnering excellence, enhanced partnership and enhanced cooperation are all relatively universal terms referring to a situation where relationship quality has increased on a general level. Hence, the reader does not know which particular elements in the relationship have enhanced. According to Li et al., (2001), partnering excellence is in fact just a term that conceals in it various positive outcomes. One cannot specify it as the outcomes vary case by case. According to Chen et al. (2007), enhanced partnership in turn is a generic concept that refers simultaneously to the increased relationship's quality and enhanced performance.

According to Wikström et al., (2010), improved relationship's quality is often the sum of many actions. The findings of this thesis support their argument, as one identified several relational actions that all have positive impact on relationship's quality. It is also noteworthy that relationship's quality often correlates with profitability and productivity. Hence, collaborative companies should consciously strive to develop their relationships in order to maximise benefits.

The second category deals with project outcomes; changes, benefits and other effects that happen as a result of relational actions. According to Chen et al., (2007), improved project outcome is the ultimate outcome of relational actions. More interestingly, Wagner & Sutter (2012) have managed to identify a correlation between innovation performance and overall performance. Hence, an inter-organisational relationship that manages to develop its innovation capacity, will likely achieve competitive advantage over its competitors and success.

According to Bonner et al., (2005), improved project outcome is the consequence of several collaborative actions, as network sensing, partner integration and relational embeddedness all have a positive impact on market performance. For example, Park et al., (2011) have been researching profit performance as an outcome of networking and managed to prove that effective networking leads to a higher profit margin. All in all, it seems that researchers have no consensus of the factors that improve the project outcome, but they seem to agree that deep inter-organisational relationship is worth investing in.

Enhanced sustainability can also be seen as an improved project outcome. According to Mathur et al., (2008), sustainability improves slowly, as it is a process of improvement rather than any general activity. Relational actions impact the relationship's sustainability level, but the effects are not immediately visible. Hence, one can say that business sustainability represents resiliency over time. Companies have however, started to pay more attention to ways to improve their sustainability level. According to Seshadri (2013), sustainability syndicate (shared responsibility in trans-organisational business) is an effective way to increase that level, as it reduces risk and lowers the barriers to entry into bigger projects.

The third category is known as a customer value-category and includes the following outcomes: enhanced customer value, enhanced service package and high level customer solution. According to Kadama (2002), customer value can be created by resonating the values of all network members, which leads to enhanced collaboration, and thereby to increased customer satisfaction. Product quality seems to also have a key role in customer value creation, as for example Young et al., (2001) see it as a top priority.

According to Walker et al., (2013), it is important for companies to meet the customer needs and via joint venture they can provide customers a service package that optimally serves their needs. Hence, an enhanced service package is the final outcome of joint venturing. In addition, also Katzy & Crowston (2008) see collaboration as an effective way to create high-level customer solutions. Although both articles present a specific pattern for service enhancement activities, the outcome is very similar.

Three of the analysed articles focused on the innovation theme. According to Bosch-Sijtsema and Postma (2009), projects are not the most opportune environment for innovation activities, as the focus is on efficient management of projects. However, they found that certain relational actions such as cooperation and the utilization of common resources increased innovativeness. Innovativeness is an important asset for companies thus, it is no wonder that researchers and companies actively seek ways to enhance innovativeness.

According to Yami & Nemeh (2014), certain relational actions foster certain type of innovations; dyadic cooperation suits better for purposes to produce incremental innovations, whereas multiple cooperation fosters radical innovations. Also Wagner & Sutter (2012), believe in joint-actions by arguing that many companies would benefit from such activities. According to them, the quality of joint-activities largely determines how effective the process innovations co-development will be. It is also important to remember that a high-innovativeness degree can be a competitive advantage, and thus, project companies should actively seek new ways to enhance their innovativeness.

The last outcome-category is known as a strategic position, and it includes certain outcomes where the collaborative companies' strategic position in their operating environment or in their network enhances. According to Bonner et al., (2005), a strong strategic network is the consequence of certain relational actions, which have secondary impact on market performance. Hence, companies should see a strong strategic network identity as a valuable asset. One can also see strong relational and functional position as a competitive advantage. For example, Ahola et al. (2013) see that a project based firm which has a strong relational and functional position can differentiate from its competitors. According to them, a strong functional position enhances functional capacity, whereas strong relational position brings the customers closer.

All in all, one can say that relational behavior leads to multiple outcomes from increased integration to enhanced customer value. It is also worth mentioning that certain relational actions produce multiple outcomes, as for example, the use of a cooperative procurement procedure primarily increases relationship's flexibility and adaptability levels, but fosters also collaboration and coordination activities. On the other hand, one should keep in mind that most of the causalities cannot be generalised as the researchers have focused on specific industries.

#### 4.4. Causal effect between antecedent, relational behavior and performance

In this chapter this thesis will present certain causal relationships that occur between the antecedent factor, relational behavior and the outcome. All the following causal chains

have been identified during the literature analysis and they describe a larger entity, as similar article findings have been located under one causal chain. Hence, the reader will have the possibility to examine causalities in a more general level.

As it is not necessary to present all these findings, six causal chains were chosen for analysis more specifically. Those articles whose empirical data has been validated by large data and statistical tests were favoured in order to guarantee that the presented causal chains refer to the actual research. The first causal chain will illustrate what kind of impact active development of inter-organisational relationship has to the project outcome.

**Figure 2.** Causality between development activities of IORs and the outcome



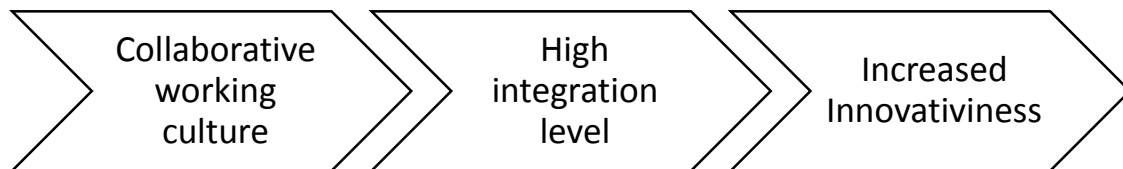
According to Ahola et al., (2013), collaborative companies often form a project-based company and develop it actively, which leads to a certain positive outcome. In their article, the achieved outcome is improved market position, but active development naturally has a number of other consequences too. For example, Chen & Chen (2007) argue that an improved project outcome is a result of various development actions. Certain development actions such as risk sharing, long-term quality focus and integration of objectives can thus be seen as constituents, which all have a positive impact on the project outcome.

In addition, Alin et al., (2013) see active development as a value creation activity. According to them there is also a clear connection between the sequence of development activities and the outcome, as active and frequent development work leads to better results. According to Boddy et al., (1998), long-term development is the most effective way to develop IOR as it commits the parties to work jointly towards mutual objectives.

The second causal chain illustrates what kind of impact collaborative working culture has on the integration process and innovativeness. Collaborative culture fosters integration,

which in turn lowers the barriers for effective knowledge creation process, which accelerates innovativeness.

**Figure 3.** Causality chain between collaborative working culture, integration level and innovativeness.



For example (Bosch-Sijtsema & Postma 2009; Ahuja 2000; Nooteboom 2002), have argued that low integration levels decrease the partnership's innovativeness, as the knowledge creation process deteriorates. According to Hamel (1991), a collaborative working culture does not only prevent conflicts between the partners, but also breeds' trust and commitment among partnering companies. Nooteboom (2002) agrees with Hamel by arguing that partners' trust towards each other promotes several aspects such as organisational learning and integration.

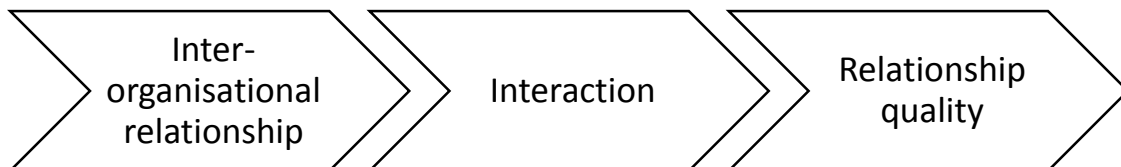
According to Bosch-Sijtsema & Postma (2009), a collaborative working culture transgresses boundaries and promotes partner integration. Ahuja (2000) has been investigating the effect that a high integration level has on partnership. According to him, firms should aim to build a highly integrative culture with its partners without getting dependent on it. According to Berente et al., (2010), companies who have congruent object worlds can innovate more effectively. Harmonisation of objectives, in turn, plays a key role in the integration process. All in all, it seems that the causal chain between collaborative working culture, high integration level and increased innovativeness really exists, though integration occurs in several forms.

The third causal chain illustrates the relationship between inter-organisational relationship, interaction and relationship's quality in project business environment based on the research findings. Relationship's quality composes of several elements such as:



cooperative benchmarking, network sensing and close collaboration that all improve the relationship's quality.

**Figure 4.** Causality between inter-organisational relationship, interaction, and relationship's quality.



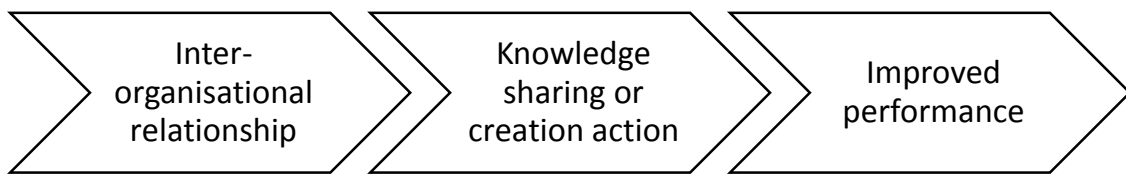
Project network, joint venture and collaborative projects are all inter-organisational relationship forms. Many researchers, such as Calamel et al., (2012), have found that collaborative companies need to interact actively and effectively in order to improve the relationship's quality. Collaboration quality is the outcome of a process of social construction and develops optimally through continuous interaction.

According to Katzy & Crowston (2008), competency marshalling increases the relationship's flexibility and affects subsequently on relationship's quality. Competency marshalling in turn requires that inter-firm relationships exist, thus one should see inter-firm relationships as a starting point for interaction. Many researchers, such as Berente et al., (2010), seem to be relatively unanimous that the relationship's quality links tightly to the level of interaction. However, it seems that continuous physical interaction is not a necessity. According to Berente et al., (2010), a jointly used information-sharing platform reduces the need for physical interaction without reducing the interaction level.

Active interaction seems to also reduce the complexity of inter-firm relationships and remove boundaries. According to Fellows & Liu (2012), companies that interact effectively can eliminate the boundaries of relationship, which have direct impacts on the relationship's quality. All in all it seems that the causality between interaction and relationship's quality is very strong.

The fourth causal chain illustrates what kind of causal relationship exists between inter-organisational relationship, knowledge sharing or knowledge creation activities and performance. It was interesting to detect that knowledge sharing and creation activities seem to lead to partially diverging outcomes, as creation seems to affect more directly on the outcome than on the knowledge sharing process.

**Figure 5.** Causality between inter-organisational relationship, knowledge- sharing or - creation action and performance.



According to Enberg (2012), a single firm is rarely self-sufficient when it comes to the knowledge it needs, thus companies form deep inter-firm relationships more often than they did before. For example, Calamel et al., (2012) argue that companies are highly interested about knowledge creation possibilities that inter-organisational relationships provide. According to Berente et al., (2010), new jointly created knowledge strengthens the companies' production ability and may lead to innovative breakthroughs. Hence, one can argue that knowledge creation activities impact to the inter-firm relationship's performance.

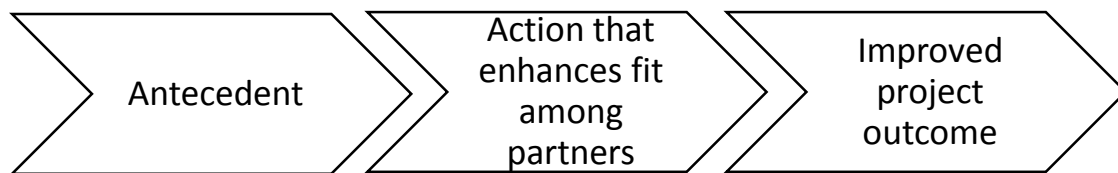
According to Crespin-Mazet & Ghauri (2007), the level of knowledge transfer and creation activities reflects directly on performance, as inter-organisational relationships, where partnering companies have high capacity for knowledge creation activities, will likely succeed better than the one's with lower capacity. In addition, Crespin-Mazet & Ghauri (2007) underline that partners should aim to generate new knowledge in cooperation in order to eliminate duplications. According to Swart & Harvey (2011), duplicated knowledge resources have negative impact on a project's success.

According to Nonaka (2007), knowing how to develop new knowledge is an important asset for collaborating companies, as it enables constant development. According to

Ribeiro (2009), the difference between knowledge sharing and creation activities is that knowledge sharing and handling activities are supportive actions, whereas knowledge creation associates directly to the performance improvement. All in all, it seems that inter-organisational relationship is a favourable starting point for joint knowledge creation, and only partner's that have high capacity for knowledge sharing and creation activities receive the full benefits of process.

The fifth causal chain discusses strategic fit and illustrates the causal relationship between the initial situation, harmonisation process and the outcome. During the literature review it was noticed that several relational actions strengthened the relationship in one way or another, by bringing partnering companies closer to each other. Hence, it was possible to form the following causal chain.

**Figure 6.** Causality between the antecedent, enhanced fit and improved outcome.



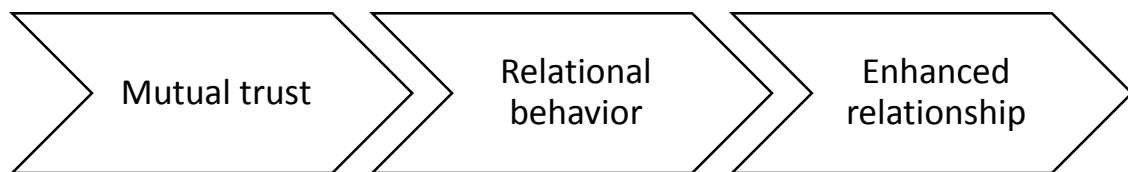
Based on the article analysis it seems that companies that unify their activities effectively achieve better results than those who don't. According to Berente et al., (2010), companies that have congruent object worlds can create knowledge more effectively than their competitors, as they share similar targets. Enhanced fit ensures that the joint-creation process focuses on the right things and benefits both parties. In addition, Enberg (2012) has argued that common understanding of the processes increases the likelihood for project's success as it enables knowledge integration activities.

However, fit does not only improve knowledge-related outcomes. According to Bosch-Sijtsema & Postma (2009), companies might also improve their inter-organisational relationship by gaining access to complementary capabilities and thereby increase their competitiveness in markets. In addition, Bonner et al., (2005) argue that network sensing, partner integration and relational embeddedness subsequently impact market

performance. It is noteworthy that all these actions increase the fit level of partnering companies.

The sixth and last causal chain deals with trust. Trust is probably the most difficult relational aspect to deal with, as it directly impacts several outcomes. During the literature analysis it was noticed that trust actually fosters relational behavior, which then influences the relationship's performance. Hence, it was possible to draw the following causal chain.

**Figure 7.** Causality between trust, relational behavior and the outcome.



According to Pinto et al., (2009), trust enhances a variety of inter-organisational relationships and is therefore often seen as a critical success factor for IOR. Though trust is a component for maintaining high-quality partnership, it is also a triggering mechanism for relational behavior. Pinto et al., (2009) further argued that trust facilitates certain relational actions such as information exchange or resource pooling, and these actions then improve the overall relationship.

According to Lahdenperä (2010), a high trust level among the partnering companies increases the likelihood of risk sharing. Other researchers also tend to see trust as an initiating factor for relational behavior. According to Jacobsson & Roth (2014), low trust levels may even prevent or weaken relational actions; as for example the information sharing process is highly tied to the trust level. If companies are not able to share information properly, they will not be capable to maximize the benefits of their relationship as information gaps slow down the process.

All in all it seems that there is always a starting point for relational action, whether it is high trust level, demanding environment or partnership itself. Relational actions, in turn,

have direct impact on certain outcomes and the quality of these actions largely determines how significant the impact will be. The reader should also understand that numerous actions could be categorized under relational behavior. Hence, certain concepts such as risk sharing, information pooling, mutual learning, competency rallying and physical interaction can all be seen as relational actions that improve certain outcomes.

## 5. CONCLUSION

For more than twenty years, inter-organisational relationships have captured the interest of researchers in different subjects. The purpose of this research was to investigate the impact of relational orientation to project business performance. One particular research question guided the process: *What kind of relational aspects and business practices project business relationships encompass and how are these relational aspects connected to a business or project performance?*

Systematic literature review was a logical method choice, as the purpose was to focus on certain high-quality journals and investigate the topic with strict criteria parameters. Key findings of this thesis derive from answers to the posed research question.

Before answering the research question, it is necessary to understand why companies' interest towards inter-organisational relationships have emerged lately. Some researcher's see that structural changes have forced companies to collaborate, whereas the majority argue that companies have just begun to realise how beneficial deep inter-organisational relationship can actually be. Typically collaborating companies seek additional value from their relationship and see it as a source of competitive advantage.

As has been said, companies have various underlying motives for entering into deep inter-organisational relationship. Some companies try to burden risk by sharing the cost of the project, while others see inter-organisational relationship as a pathway towards a larger resource pool. During the analysis it was also noticed that relational actions are tied to the relationship's goals. If the collaborative companies seek to increase their innovativeness, relational action will likely promote this target. Thus, relational actions should be seen as strategic choices that companies make in order to succeed.

As noted, inter-organisational relationships or relational action do not guarantee success. However, a systematic literature review pointed out that relational behavior increases the likelihood of success. In most of the cases, relational action had either a direct or indirect positive effect on performance. Effectiveness in turn is dependent on the quality of the relational actions. For example, a barrier-free knowledge sharing process leads to an

enhanced innovativeness more often than a process with many barriers. In addition, high-quality collaboration typically increased trust level among the partners. Thus, partnering companies should value quality over quantity when building inter-organisational relationships.

One important finding was that certain relational actions foster multiple outcomes. For example, Pesämaa et al. (2009) found that the adaption of cooperative procurement procedures enhanced cooperation and increased adaptability simultaneously. It was also observed that relational behavior might produce unintentionally value gains for collaborating companies. Hence, companies that form inter-organisational relationships may have the possibility to receive unexpected value gains from their relationship.

Systematic literature review also revealed that in project business inter-organisational relationship has numerous forms, as relationship can either be dyadic or multiple by its nature. Each collaboration form seems to have its own specific characteristics, which is why companies should aim to choose the collaboration form that optimally suits on their purposes. For example, strategic alliance is a suitable form in situations where partnering companies want to remain independent, but collaborate in order to reach their ambitious targets.

Project business relationships encompassed numerous relational concepts that can be roughly divided into three categories: a) contextual factors or antecedents to relational behavior, b) concepts related to the relational activity where relational action occurs in a one way or another and c) concepts that are certain outcomes of relational behavior. It is noteworthy that the causal chain between antecedent, relational behavior and the outcome existed in every article analysed.

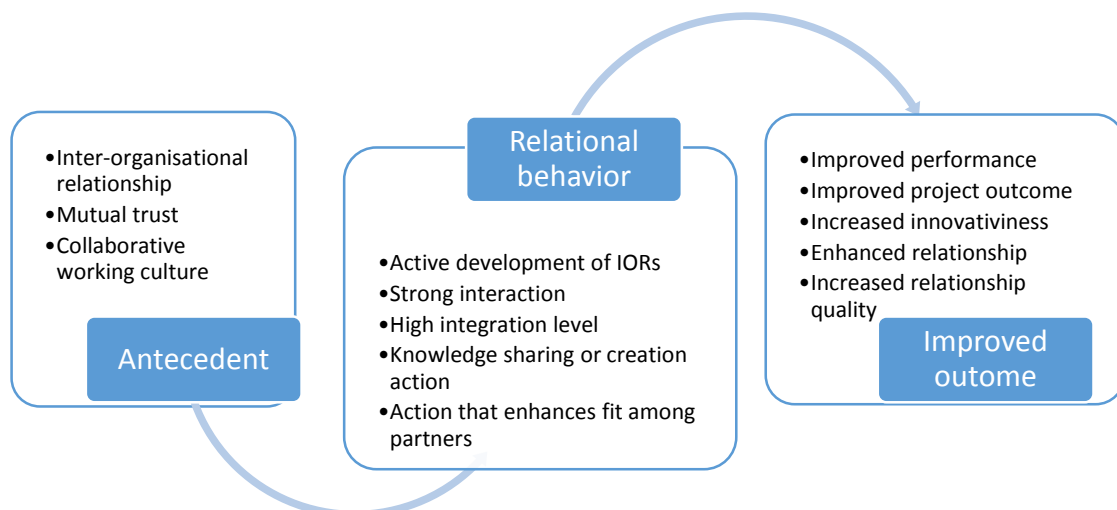
It was also possible to identify the most common outcomes that relational actions had. In more than seventy per cent of the analysed articles, relational behavior either increased relational quality or enhanced the relationship's performance. It was also an interesting finding that relational behavior did not weaken the companies' functional capacity in any of the analysed articles. Hence, companies that are not collaborating yet should reconsider whether deep inter-organisational relationship would be worth investing in.

It also seems that the amount of inter-organisational relationships will likely increase in the future, as the competition gets tougher in every sector and deep inter-organisational relationships will become an attractive option for more and more companies. One can identify the positive trend by comparing the number of published articles dealing with inter-organisational relationship in different time periods. Researchers have published more content in the 2000s than they did during the whole 1900s.

In conclusion, the causality between relational behavior and increased project business outcome exists, although the effectiveness of relational actions varies between the projects. The partnering companies' willingness to maximise the benefits of their inter-organisational relationship should focus on the quality of relational actions, as high quality process increases the probability of success. In addition, it was observed that long-term collaborative relationship's generated better results than short-term relationships.

The following figure (figure 8) will summarise the conclusion part in an easily interpretable format by summarising the causal chains between antecedent, relational behavior and outcome presented in the result chapter.

**Figure 8.** Causality between antecedent, relational behavior and outcome, summarise.



A guideline for future research would be that researcher's should focus more on measuring the effectiveness of relational actions, as most researchers have not been able



to verify it. In other words, researchers have managed to identify the positive correlation between relational behavior and the outcome, but not to determine how significant the impact is. In addition, in many of the articles the empirical result was not verified by large data and statistical tests. Hence, more high-quality research is needed.

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