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**Development of relationships in
interorganizational networks: studies in
the tourism and construction industries**

Pesämaa, Ossi

Luleå University of Technology

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Development of Relationships in Interorganizational Networks

Studies in the Tourism and Construction Industries

Ossi Pesämaa

Luleå University of Technology
Department of Business Administration and Social Sciences
Division of Industrial Organization

Development of Relationships in Interorganizational Networks

Studies in the Tourism and Construction Industries

Doctoral thesis
Ossi Pesämaa

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Chairman Professor Sven Åke Hörte

Opponent Professor Arthur Money

Grading Committee Professors
Anders Segerstedt
Dieter Müller
Rauli Svento

Thesis Supervisors
Professor Sven Åke Hörte
Doctor TorBjörn Nilsson

Mentor
Joseph F. Hair, Jr

Diamonds, the hardest known natural material, are made of coal developed during a long period of time under extremely hard pressure. In their pure form diamonds are colourless and break up incoming light as other materials cannot do. Diamonds are difficult to find, expensive and have a high economic impact for both industrial consumers (e.g., drillers) and jewellers. They are typically found below the ground, in well-assorted shop windows, on rings, necklaces, watches and in safety deposit boxes. Less expensive, synthetic diamonds are more accessible. A diamond on a married couple's finger is a symbol of a relationship that someone shares with a person they love and respect very much. Marriage in turn is a very strong metaphor for committed relationships between firms and the way these relationships evolve through good and bad times. So, when someone wants to develop a relationship, which deserves to be symbolized with a diamond, they prepare it carefully. They do this because diamonds, like relationships, can drill into hard and challenging situations and be the head of the drill that burrows its way into new opportunities.

Appended articles

1. Pesämaa, O. (2004:59). Interfirm network content analysis. Working Paper No 2004:59, (Luleå University of Technology: Division of Industrial Organization).
2. Pesämaa, O., Hair J. F. & Eriksson, P-E (2007). To protect and attract: Firms cooperating in nature-based tourism destinations. Submitted in October 2007 to Tourism Culture & Communication.
3. Pesämaa, O., Hair. J. F. & Jonsson-Kvist. A-K. (2007). When collaboration is difficult: The impact of dependencies and lack of suppliers on small and medium sized firms in a remote area. World Journal of Tourism Small Business Management, **1**: 6-11. (lead article).
4. Pesämaa, O. & Hair, J. F. (2007). More than friendship is required: An empirical test of cooperative firm strategies. Management Decision, **45 (3)**: 602-615.
5. Eriksson, P-E. & Pesämaa, O. (2007). Modelling procurement effects on cooperation. Construction Management and Economics, **25 (8)**: 893-901.
6. Pesämaa, O., Eriksson, P-E. & Hair, J. F. (2007). Validating a model of procurement in the construction industry, Submitted to Journal of Engineering and Technology Management.
7. Pesämaa O., Örtqvist, D. & Hair J. F. (2007). It's all about trust and loyalty: Partner selection mechanisms in tourism networks. World Journal of Tourism Small Business Management, **1**: 55-61.
8. Pesämaa, O. & Hair J. F. (2008). Cooperative strategies for improving the tourism industry in remote geographic regions: An addition to trust and commitment theory with one key mediating construct, Forthcoming in Scandinavian Journal of Hospitality and Tourism, **8 (2)**.
9. Pesämaa, O. (2007b). Against the odds: Building interfirm commitment under trying circumstances. Submitted in June 2006 to Journal of General Management.
10. Pesämaa, O. (2007c). The process of interorganizational commitment. Submitted in June 2007 and currently under revision to resubmit to International Journal of Tourism Policy and Research.

Abstract

A firm is a type of organizational arrangement often involved in interorganizational networks. Typically, interorganizational networks are the outcome of individuals in firms working together in cooperative groups. Through these individuals firms establish both formal and social relationships. The individuals develop lasting relationships because they share time, interests, goals, industrial, geographical or some other type of relatedness. Shared goals and interests of the relationship become an observable unit built upon various constructs. Interorganizational networks typically involve one or several different types of relationship constructs. This thesis elaborates on different relationship constructs and proposes different roles for each construct. All relationships are studied at a firm level since managers are considered key informants for the firm. The overall research question is: How do relationships in interorganizational networks develop? The main objective is to examine the development of these relationships in interorganizational networks. The approach is to synthesize 10 essays on relationships between five constructs – reciprocity, trust, cooperation, interorganizational commitment and loyalty. The results indicate that relationships are based upon a long term orientation. Secondly, relationships develop from certain processes before interaction is initiated. These processes involve the influence of cooperative motives to enter interorganizational networks and preferences upon which potential partners are selected. Furthermore, the initial processes involving motives and preferences expand to include the development of relationships based on friendships, interpersonal commitments, reciprocity and trust. The ultimate outcome of this process is stability and maturity, which means relationships are sustained by dependencies, their initial objectives and the desire to protect. Dependencies are reflected in interorganizational commitment, which means the firms' future intentions and promises strengthen the relationships. The objectives interorganizational networks are founded upon motivate network firms to develop relationships based on cooperative strategies so that shared goals and decisions can be effectively pursued. Finally, the firms typically protect their relationships by developing loyalties. All models represent unique examples of potential relationships and some models are particularly important because they were purified so that convergent, nomological and discriminant validity criteria could be met. The results are consistent with but extend previous research and are considered important for future business studies in general, but particularly within the tourism and construction industries. A practical implication of the research is thus that in evaluating new opportunities, firms should carefully examine the characteristics of potential partners as well as how the partnership might influence the content of their relationships. Another practical implication is that trust and reciprocity should be viewed differently in building successful network partnerships.

Sammanfattning

Företag kan återfinnas i interorganisatoriska nätverk och vanligtvis kan dessa nätverk ses som ett resultat av att individer i olika företag strävar efter samverkan. Via individerna etableras sociala och formella relationer mellan företag som kan resultera i långsiktiga relationer, eftersom de delar tid, intresse, mål, bransch, geografisk eller annan typ av tillhörighet. Mål och intressen i dessa relationer utgör observerbara enheter i den föreliggande avhandlingen och utgör därmed grunden för olika relationsbaserade "constructs". Interorganisatoriska nätverk innehåller vanligtvis en eller flera typer av relationsbaserade "construct". Den övergripande forskningsfrågan är: *hur utvecklas relationer i interorganisatoriska nätverk?* Samtliga relationer studeras på företagsnivå genom att göra ledare i företaget till informanter.

Avhandlingen baseras på en syntes av 10 olika artiklar som på olika sätt beskriver reciprocitet, förtroende, samverkan, interorganisatoriska förbund och lojalitet. Artiklarna är presenterade på följande sätt: Först presenteras två konceptuella studier följt av åtta empiriska bidrag. En större del av de empiriska bidragen är exempel från turism och besöksnäring. I syfte att ge ett bredare perspektiv finns två artiklar med från bygg- och anläggningsbranschen.

Resultaten pekar på att relationer är baserade på långsiktighet, dessutom utvecklas relationer med hänsyn till motiv till att ingå samverkan samt val av partners. De initiala stegen, motiv och val av partners, följs av en process som syftar till att bygga varaktiga relationer. Detta är en process som innebär att vänskap, interpersonliga förbund, reciprocitet och förtroenden utvecklas. För att relationerna skall förbli varaktiga måste de dessutom nå stabilitet och mognad, som betyder att relationerna förblir varaktiga genom beroenden, dess konstituerande mål och viljan att skydda. Beroenden är speglade genom interorganisatoriska förbund, som betyder att företagen stärker relationer genom intentioner och löften. Konstituerande mål, motiverar samverkande företag att utveckla relationer som baseras på strategier så att delade mål och beslut kanaliseras på ett effektivt sätt. Slutligen, skyddar företaget dess relationer genom att skapa lojaliteter.

Resultaten är i överensstämmelse med tidigare forskning men utvidgar den tidigare forskningen. Resultaten är även viktiga för framtida studier inom företagsekonomi generellt och speciellt viktiga för turism och besöksnäring samt för bygg- och anläggningsbranschen. En praktisk implikation av studien är att när företag värderar nya möjligheter, så bör de ta hänsyn till typ av partners såväl som hur partnerskapet kommer att påverka relationens innehåll. En annan praktisk implikation är att förtroende och reciprocitet bör tydliggöras olika när framgångsrika nätverk av partners byggs upp.

Preface

Even though this thesis represents an independent work I would like to share my deepest appreciation to some individuals that should be credited for their hard work in assisting, supporting, reading, editing and commenting on this work. Data collection for the work was conducted in 2002 and numerous contacts were developed that contributed to completing the thesis.

I would first like to thank my principal supervisor Professor Sven Åke Hörte and assisting supervisor Dr TorBjörn Nilsson for comments and support throughout this process. I could not have completed this project without them.

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1. Introduction

This chapter begins by listing the advantages and disadvantages of interorganizational networks and after that proposes a justification to study how relationships in interorganizational networks develop.

1.1 Advantages and disadvantages for firms in interorganizational networks.

The objective of this thesis is to examine the development of relationships in interorganizational networks. A firm is a type of organizational arrangement often involved in interorganizational networks. Individuals in such organizations perform the function of activating formal and social interorganizational relationships with other organizations. The relationships sometimes become lasting while others break up very early.

Dacin, Hitt & Levitas state that *“failure is the incompatibility of partners”* (1997:4). They propose that the *“choice of the right partner can yield important benefits, whereas the failure to establish compatible objectives, or communicate effectively can lead to insurmountable problems”* (1997:4). Todeva & Knoke expand this argument further by noting that interorganizational networks can lead to *“higher return on equity, better return on investment and higher success rates”* (2005:123).

Hence, interorganizational networks can change and affect a firm in a productive or a negative way. Moreover, depending on the efficiency of relationships firms can enjoy many advantages or experience disadvantages when their time and energy devoted to relationships is not productive.

These advantages and disadvantages can be examined at a firm (Wincent, 2006), society (Eklund, 1993) and network level (Ford, 1997). This research focuses on the firm level. But at a different level and from a different point of view, an advantage can change character. Such changed perspectives could cause advantages to become disadvantages (e.g., cartels).

1.1.1 Advantages

The first advantage is that a firm can obtain legitimacy from involvement in interorganizational relationships. The term legitimacy comes from legitimate and summarizes activities that lead firms toward being perceived as legitimate by their key stakeholders (Lawrence, Wickins & Phillips, 1997). Key

stakeholders typically expect that a firm can prove they have political support, essential resources and financial stability. In turn, these three aspects of legitimacy represent a wide range of activities. These activities are an organization that meets all legal requirements; resources that make their services and/or products attractive; and finally a firm structure that makes potential stakeholders feel safe and confident in performing exchanges with the firm. Assessing a firm's legitimacy is not easy. Therefore, firms develop logos, brand names and partners through which they claim they have the necessary credibility. From the interorganizational network (e.g., a tourism destination like Levi in Finland), firms gain access to a shared logo, brand names and other partnering based legitimacies (Haahti & Yavas, 2004). Logos, brand names and partners are often expressed as a small symbol or sign on a web site or some other public document. But, these symbols indicate the firm is part of a larger group of firms involved in interorganizational networks. Both, small and large firms have to cope with problems that relate to legitimacy and therefore also need interorganizational networks.

A small tourism firm needs legitimacy to be able to show they can provide not just rooms but also other related activities guests typically expect (Pesämaa, Hair, Klefsjö & Örtqvist, 2007). Hotels offering lodging can actively develop their business by including services such as guides, conference facilities, taxis, general transportation firms, travel agents, bars, restaurants, car rentals and even more or less unrelated businesses such as grocery stores, banks, hospitals and chiropractors (Järvinen, 1988; Svensk, 1998). These interorganizational relationships do not appear in the external bookkeeping or other public records. Moreover, some relationships are more crucial than others and may be very decisive for a firm. Firms may even hope to never make use of the relationship. For example, hotels may need to search for the number in a telephone directory when they need to contact someone at the hospital even though this phone number is very important at that time. Others, such as the local taxi, may also be decisive partners, with their own direct phone line in the lobby. Typically a tourism firm includes most if not all of these relationships clearly in their brochure in order to prove the firm is capable of offering services to guests beyond the basic hotel room.

Legitimacy is also an important aspect for larger firms. Consider the example of the construction industry. Even though a large construction firm may be capable of independently completing very large construction projects such as building a tunnel, there are risks that can put the construction firm in a difficult position. For example, a tunnel that is not built correctly will assume liabilities to compensate for their shortcomings. These liabilities can be very expensive so it is common for firms in the construction industry to form joint ventures. One function a joint venture performs is the buyer as a stakeholder not only joins with a strong group of specialists (Ngowi, 2007) but also feels safe and confident about their financial stability (Eccles, 1981).

A second advantage firms can gain from being involved in interorganizational networks is enhancing their reputation. Improving their reputation with other firms helps them to reach more firms and at the same time tell their own buyers they have a broader variety of products than would be true otherwise.

A third advantage is that firms can share costs of communication and marketing to their buyers (Lamb, Hair & McDaniel, 2008). Part of a firm's plan to promote to buyers involves marketing and other communication strategies. Today many firms are linked by a website. Marketing is very costly and if it is performed incorrectly it can hamper rather than help firms to promote their products. At the same time firms usually attract other firms both at the local, national and global market. These promotion activities can be very expensive. Joint marketing is one way to perform these activities more efficiently. For example, shared websites make communication and promotion with buyers more efficient and effective.

A fourth advantage is that a firm can share risks with other firms. This aspect of the advantages is particularly valuable in projects that involve research and development (Wildeman, 1998).

A fifth advantage a firm can gain from being a member of an interorganizational network is becoming part of a specialized group. This advantage is very prevalent in the construction industry where there can be up to 40 specialists ranging from architects, plumbers, carpenters, salespeople and environmental specialists that cooperate in order to offer solutions to complex problems (Ngowi, 2007).

A sixth advantage is to obtain financing (Volery, 1995). Obtaining financing is a critical element for many small start-up firms. Public sources that offer financing for these firms may also ask or even force firms requesting their financial support to be part of a particular interorganizational network. Obtaining financing through a network can be more efficient if the firms form a consortium through which they can attract capital for a specific purpose. One example of this would be a shared website that displays the different products and services that are available from these firms.

A seventh advantage for firms is that they can share and complement each other with competencies through an interorganizational network (Ylinenpää, 1997). Sharing and complementing each other with competencies is very common. Relationships inside interorganizational networks perform different functions, some of which are based on operational issues while others involve the function of a trust based friendships such as "listening" to other partners when they have leadership or conflict related issues.

1.1.2 Disadvantages

One disadvantage of being in a network involves the commitments required by being a member. One possible consequence is a firm may “over commit” or “over invest” in the relationship (Adler & Knowlton, 2002) and their network partners take advantage of this and get a free ride from the firm. The reason firms over commit or over invest in relationships is that some of these commitments arise unexpectedly and appear to be opportunities. The firms may not be ready for such commitments or may not have time to plan for them.

A second disadvantage is that the costs and effort of being involved in interorganizational networks are difficult to assess and estimate (Park & Russo, 1996). Many efforts to build interorganizational networks fail because the group lacks specific goals. Goals are important because they require firms to assess the value of a strategic situation – which could be a cooperative scenario. Specifically, in the traditional management literature before entering relationships many firms estimate or even calculate the benefits of particular disadvantages. However, many firms are not statistically trained or oriented and thus not capable of evaluating whether to enter networks. As a consequence, they likely do not fully consider the probability that the opportunity they are confronted with will cost more than it benefits. Indeed, many firms do not calculate their time in terms of money and effort, which can result in substantial losses. In addition, many of these efforts are initially difficult to assess because the benefits may only emerge in five to ten years (Park, Chen & Gallagher, 2002).

A third negative aspect of interorganizational networks is they inherently involve risk. Risk comes with the fact relationships take time to develop. For instance, a firm may invest and commit resources to a long term relationship that is expected to be beneficial later but fails before the benefits emerge. This is evidenced by the fact that sixty percent of all interorganizational networks break-up and thus become failures (Dacin, Hitt & Levitas, 1997). In spite of the high failure rate, many small firms enjoy these networks and believe they are beneficial. Moreover, many firms enjoy interorganizational networks and overlook certain risks. Interorganizational networks are often formed to respond to a certain interest in pursuing a particular goal. Hence, when interorganizational networks are formed firms often initially join to minimize the high level of risk and it is likely that some firms will drop out along the way.

A fourth disadvantage in interorganizational networks is that some governing norms are violated often (Edelman, Bresnen, Newell, Scarbrough & Swan, 2004). Edelman, et. al., (2004) say this is particularly prevalent when one partner refuses to follow certain principles that govern the relationship. They found that many firms believed in the principle of reciprocity (i.e., give and take) in combination with trust and therefore got upset when partners

disclosed crucial technological information without crediting the initial source. This example suggests how exploitation, disrespect or violating a firm's expertise and knowledge can create pitfalls. In fact, often such violations cause defensive behaviours between networks of partners (Edelman et al, 2004).

A fifth disadvantage is that many interorganizational networks involve traditions. Traditions can be very useful to solve problems quickly and smoothly. However, traditions can also create frustration for individuals that feel the "form" and "process" is more important than the "content". Traditions that tie firms to a particular approach are prevalent in many local networks (Simmel, 1906).

A sixth disadvantage is that many interorganizational networks also contain loyalties and dependencies. These loyalties tend to lock in decisions with their current relationships instead of permitting flexibility (Portes, 1998). This locking of decisions by personal loyalties is also known as "the paradox of embeddedness" (Uzzi, 1997).

Finally, interorganizational networks can develop into cartels. Cartels exist when a number of firms get together to hinder competition by jointly controlling production and price within a certain industry (Eklund, 1993). Cartels can in some cases be beneficial for individual firms but typically are a disadvantage for society as a whole. Cartels are therefore per se illegal and typically put firms into difficult situations.

1.2 Synthesis of advantages and disadvantages

This thesis began by listing examples of advantages and disadvantages of interorganizational networks in order to assess the value of developing relationships. The advantages and disadvantages are not always obvious and may be difficult to achieve. Sometimes it takes several years to develop an idea into an advantage and therefore patience is important for those that want to enjoy such advantages. Sometimes an advantage may occur very quickly and smoothly. On the other hand, disadvantages also can emerge quickly and create problems for the firms for many years.

Negative processes can emerge from relationships that cannot compensate for eventual losses. In addition, the disadvantages seem to be related to issues that have to do with a firm's or several firms' inability to manage relationships. In spite of all these problems, there are many beneficial factors firms can enjoy from interorganizational relationships.

Since interorganizational networks appear to be beneficial for firms, it is logical to study how these relationships could be performed better and therefore improve the likelihood the results will be beneficial for small as well as large firms.

1.2.1 Research objective and research question

The objective of this thesis is to examine the development of relationships in interorganizational networks. The objective focuses on relationships as processes which ultimately lead to stable, mature, cooperative, committed and loyal relationships. This objective aims at contributing to theory development within membership-based interorganizational networks. It is assumed that better knowledge of how these relationships develop will help managers as well as scholars to benchmark their practices of how to make relationships more efficient, which in turn can help network partners convert activities, participants and resources into higher values. The approach for addressing this question is to assemble 10 articles that have been developed on this topic during the past six years – complemented with an extended summary, which integrates the contributions of the articles to provide a broader understanding.

This thesis addresses the following research question: *How do relationships in interorganizational networks develop?* To approach this question the thesis examines the process of how these relationships are developed. The thesis also examines the different process stages through which contents in relationships develop.

1.3 Research approach and structure of thesis

This thesis work started with a comprehensive literature review, using broad definitions of networks. Initially, a number of core reference points were singled out. These reference points were based on earlier research and have contributed in this thesis to illustrate a diamond of interorganizational networks. This diamond has different sides and facets that become clearer when viewed from different perspectives.

The primary reference for this diamond is Parkhe (1993). Parkhe integrated interorganizational network research by proposing a general framework – that specified how particular interorganizational relationships such as reciprocity and trust are interrelated with cooperative motives to enter networks as well as procedures for selecting a potential partner. The framework of Parkhe (1993) was later complemented with a seminal work of Wetzels, de Ruyter & van Birgelen (1998) that also examined how relationships develop. Their approach was somewhat different and started by saying there is a basic assumption for

all interorganizational relationships that it takes time to develop relationships. The similarities to Parkhe were that trust was considered as something that develops from a process. But instead of focusing on motives and partner selection they used the terms “awareness” and “trial and error” to suggest a direction for this development process. Moreover, they emphasized that some of these processes are initiated before the actual interaction takes place and that firms start by positioning themselves towards a partner. Then via a stage of exploration (i.e., trial and error) and a stage of expansion (i.e., trust) they develop committed relationships. This development is discussed in detail later (see chapter 2.3-9).

This thesis takes into account the insights offered by both of these studies. The work of Parkhe (1993) was published in the *Academy of Management Review* and thus represented a work that was based on strict theoretical assumptions with no empirical or sequential claims. Wetzels, de Ruyter & van Birgelen (1998) strongly influenced this thesis since they applied an empirical sequential order to several of these concepts and also added commitment as the ultimate stage for successful relationships. This research thus combines these previous studies by developing the following ideas:

1. A basic assumption is that it takes time to develop relationships (Wetzels, de Ruyter & van Birgelen, 1998). Long term orientation is therefore considered as an important assumption for interorganizational relationships.
2. Before the interaction takes place firms enter relationships with specific motives (Parkhe, 1993). Motives are thus important for the development of relationships.
3. After considering what motives are most important firms select partners carefully (Parkhe, 1993). Careful partner selection is thus the next stage of the process in relationship development.
4. After selecting partners, the firms move into a stage that expands the relationship into friendships, interpersonal commitment, trust and reciprocity (Parkhe, 1993; Wetzels, de Ruyter & van Birgelen, 1998). These expanded relationships are thus the next stage of the relationship process.
5. Similar to Wetzels, de Ruyter & van Birgelen (1998) this thesis claims there is also a final stage which is stability and maturity. The final stage of relationship development includes three important mechanisms that lock the relationship. First, interorganizational commitment, which reflects the firm’s promises and intentions. Second, their cooperative strategies, which are reflected by shared goals and decisions. Third, loyalty, which protects the relationship.

The five stage perspective on how relationships develop is a serialized approach. However, other perspectives which examine loops as well as other factors are possible. Serial approaches are often criticized because they only

consider those factors that are in the model and the direction that is proposed. The advantage of other approaches is they can capture very specific situations. Very specific situations and nuances are therefore often found for instance with case study approaches. However, this thesis focuses on a model that captures several factors considered relevant based on earlier studies and then makes use of this existing knowledge to propose testable models. The serial approach represents one proposed solution to how interorganizational relationships develop. The five stages represent the central contribution of this thesis. The stages are included in a metaphor based framework labeled as the “the relationship diamond” (see Figure 2). The relationship diamond is based on a combination of Parkhe (1993), Wetzels, de Ruyter & van Birgelen (1998) and other empirical articles that specifically relate to this thesis. The metaphor framework is also extended to an explicit process based model.

One important complimentary reference that was influential for this work is Mavondo & Rodrigo (2001). In their research several scales that measured interorganizational relationships were operationalized and tested. Two other scholars – Volery (1995) and Wildeman (1998) – were also important because they operationalized and examined motives to enter networks and partner selection processes in interorganizational networks.

The individual articles that relate to this thesis work are shown in Figure 1, which also provides the structure of the thesis. Each of the articles represents a specific area of interest.

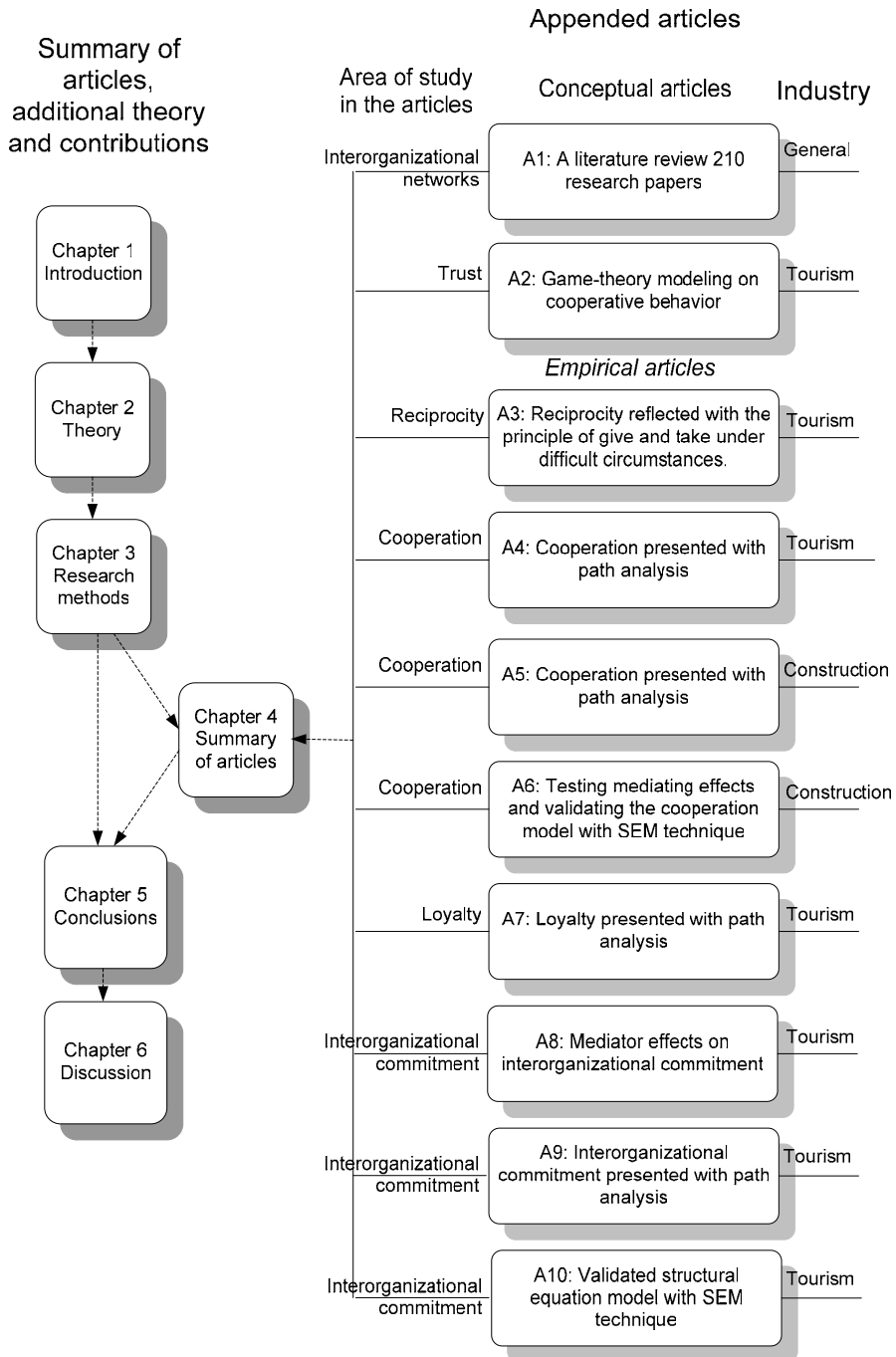


Figure 1: Structure and content of thesis

This thesis is a compilation that provides a summary of 10 different articles that cover different aspects of how relationships develop in interorganizational networks. The thesis also summarizes additional theory and new contributions by integrating the individual contributions to one point, the summary. In Figure 1 articles are denoted as A. The articles are different in content but all contribute in different ways to completing this thesis objective. For instance, two articles are conceptual, two are empirical examples from the construction industry and six articles are empirical contributions from the tourism industry. The empirical articles are based on three different data collections.

All of the individual articles are assembled under one umbrella, which is the summary of articles (see Figure 1). The structure of the summary is one introductory chapter that provides an overview of the advantages and disadvantages of being involved in networks. The introductory chapter concludes that it is reasonable to study how relationships in interorganizational networks develop. The second chapter discusses theory, which first classifies different interorganizational networks. Furthermore, the theory chapter develops a metaphorically based framework of how relationships in interorganizational networks theoretically develop. The third chapter presents applied research methods, principles, research design and how this study dealt with methodological aspects that relate to reliability and validity. Chapter four presents an overview of all appended articles and also respectively presents details of each article. Chapter five presents some conclusions that can be drawn from the thesis and chapter six discusses these results in a broader sense. After presenting the references, the reading guide for articles analyzed in the literature study and two of the questionnaires, the actual articles follow in an appendix that includes 10 articles. Finally, there is an appendix with a list of articles, book chapters and reports produced during this period as a PhD student.

Each of the 10 articles represents an individual area and a specific domain in which the research question is examined (see Figure 1). The articles demonstrate how several theoretical and methodological insights have grown throughout the thesis process (see Figure 1). The two core areas, cooperation and commitment, are examples of how different methodological tests purified the models so that mediation and criteria of validity could be met. Specifically, some models (see appended article 5-6; and article 8-10 in Figure 1) therefore started with sequential models tested by summated scales through path analysis but were later developed into full structural equation models (SEM) which gave more developed insights of foremost mediation and validity.

2. Theory

This chapter presents the theoretical perspective of this thesis. The chapter begins by classifying different interorganizational networks. The chapter suggests a metaphorically based framework of how relationships in interorganizational networks theoretically develop. The research design is a revisit and extension of Parkhe (1993) and Wetzels, de Ruyter & van Birgelen (1998) which provide the central theoretical foundations for the thesis.

2.1 Classification of interorganizational networks

Interorganizational networks refer to relationships formed by organizations in diverse vertical and/or horizontal settings (Gulati & Gargiulo, 1999). This definition is general and useful as a means of introducing and preparing scholars to study networks with little structure.

Interorganizational network research typically is thought of as not being a discipline, but rather as a subfield of organization theory. Discussion about whether it is actually a discipline can be found in many different journal articles and books. In addition, the impact of network organizations has increased because more small entrepreneurial firms, for example, in Silicon Valley, California and Prato, Northern Italy, have shown that combining activities and specializing with external organizations can help firms to compete in global markets. The need for specializing is also an effect of more challenging technological requirements as well as products with more services. (Nohria & Eccles, 1992)

Nohria & Eccles (1992) point out that interorganizational network research needs to carefully consider what is being studied. Relationships and the units (i.e., individuals or firms) that together form the basis for the study need to be carefully examined. Since many studies have reported contributions by isolating effects precisely there is broader support today for studying interorganizational networks from the point of view of a relationship (Ford, 1997), the manager (Möller, Rajala & Svahn, 2005), or the firm (McGee & Thomas, 1986). There is thus more freedom to perform interorganizational network studies today than was true in the past. This thesis has focused on the firm and how firm relationships can be developed in interorganizational networks.

Even though the literature on interorganizational networks is relatively extensive several authors suggest there are a limited number of classifications of organizations (McGee & Thomas; 1986; Harland, Lamming, Zheng & Johnsen, 2001; Murto-Koivisto, Routamaa & Vesalainen, 1995; Möller, Rajala

& Svahn, 2005; Johnston, Peters & Gassenheimer, 2006). Classification is one way to clarify that networks differ and that explanations may also be different depending on the type of interorganizational network.

The discussion of classifications of networks in this thesis is drawn primarily from the literature of Murto-Koivisto, Routamaa & Vesalainen (1995); Harland, Lamming, Zheng & Johnsen (2001) and Johnston, Peters & Gassenheimer (2006), which are based on two dimensions: (1) the degree of influence and (2) involvement the firm has in the network. The issue of influence and involvement is important because it has implications about the extent to which a firm can exert control over the network. Table 1 summarizes a number of classifications that can be used to study interorganizational networks. The order of the classifications sequentially presents interorganizational networks with different degrees of influence and involvement.

Table 1: Network classifications & definitions

Classification	Definition	Study
Development & cooperative groups	Networks of voluntary organizations that meet to share costs and ideas for development.	Murto-Koivisto, Routamaa & Vesalainen, 1996.
Industrial networks	Interorganizational networks located in the same geographical area with related or unrelated industry belongingness (not necessarily voluntarily).	Porter, 1998
Strategic alliances	Voluntary IO ties of organizations sharing goals of risks involved in technical development, market development, resource specialization or larger scale projects.	Gulati, 1995.
Joint ventures	JV involve specific technical and non specific emotional ties that share control over a specific entity. JVs contain both strong and loose partnership organizations that share risks, liabilities and responsibilities.	Friedman & Kalmanoff, 1961
Joint Unit	Organization formed by a number of independent organizations with the intention to remain in it.	Murto-Koivisto, Routamaa & Vesalainen, 1996

The first class, which is *development and cooperative groups*, has unclear and unspecific goals regarding the direction of the particular interorganizational network. Therefore, influence and involvement are low. This classification is likely when cooperation is immature and formed for local development purposes (see appended article 3, Pesämaa, Hair & Jonsson-Kvist, 2007). Typically firms in development and cooperative groups share information, ideas, learning and costs on a limited basis (Murto-Koivisto, Routamaa & Vesalainen, 1996).

The second class, *industrial networks* (Brusco, 1982), exhibits more influence and involvement than development and cooperative groups do. In this classification firms are typically related by industry and geography. Industrial networks are not always formalized by a shared contract, but may involve independent formal and informal contracts between suppliers, service providers and sales organizations. Thus, one firm may not be directly affected by the other firm, but may be affected indirectly (Bagozzi, 1975). Because of the indirect links to each other these groups could also typically be said to be characterized by low intensity and involvement. However, through mutual specialized interorganizational network systems this classification can develop and sell goods from a particular area with emphasis on a specific industry, which of course increases the influence and involvement. In tourism industrial networks are considered applicable since tourists visit a specific destination and will have their needs met from tourism and tourism related businesses. Influence and involvement in such industrial tourism networks varies a lot. Sometimes a hotel is directly related to transportation companies, restaurants, bars and guides but also benefits from local vineyards as Porter (1998) emphasizes. Since industrial networks appear in regions and are controlled from one point, members do not always voluntarily enter the networks. For example, some of them may belong to the group and pay operating fees which are controlled via the network and thus create forced incentives to achieve if they are involved in the network. Forcing the organizations into a group may decrease influence and involvement.

The next class is *strategic alliances*. Strategic alliances are usually formed by larger companies and respond to the complexity of tasks (Killing, 1988). Strategic alliances are defined as voluntary interorganizational ties sharing goals and risks involved in technical development, market development, resource specialization or larger scale projects (Gulati & Gargiulo, 1999). Strategic alliances can perform the function of spreading risks. This link to specific tasks and risks is assumed to generally enhance influence and involvement. Sometimes firms meet with other firms in different and new alliances (Gulati, 1995). These groups often have less formal agreements but still work together closely (Johnston, Peters & Gassenheimer, 2006). This latter situation decreases the influence and involvement, even though it is typically much higher than in cooperative groups.

The fourth class is *joint ventures* involving technical and non-specific emotional ties that share control over a specific entity. In joint ventures there typically is a high level control which leads to greater influence and involvement (Pfeffer & Nowak, 1976). The firms likely will want to know specific information about how costs and risks are shared. Joint ventures contain both loose and strong partnership organizations that share risks, liabilities and responsibilities (Friedman & Kalmanoff, 1961). Joint ventures are usually more formalized, since the members form the organization as a totally new entity controlled by an equivalent position for the members. This

will also increase influence and involvement. Joint venture partners usually share revenues and costs, which also makes them more equal in sharing risks. This mode is common when construction companies build bridges that involve high risks, but where there is a need for an entity that can ensure all liabilities are covered.

The last classification, *joint units*, refers to new networks formed by a number of independent organizations with the intention of remaining in the joint unit (Murto-Koivisto, Routamaa & Vesalainen, 1996). The member organization is here assumed to want control over their own interest in that organization, which also ultimately leads to high influence and involvement.

The classification of networks is used to position the networks examined in this thesis (see section 3.2). This network classification is important because it generates different motivations resulting in different network objectives. Another practical value of classifying was to facilitate understanding of how networks could be examined. The thesis framework is thus based on interorganizational network theories (Friedman & Kalmanoff, 1961; Kogut, 1988; Harrigan & Newman, 1990; Parkhe, 1993) which relate to interfirm network theory (Phillips, 1960). Broadly, interorganizational network theory comprises individuals, groups and organizations linked together through relationships (Fombrun, 1983). A firm is typically an arrangement found in interorganizational networks.

2.2 Contents of relationships that form constructs

Interorganizational relationships are constructs that have certain contents (Morgan & Hunt, 1994). Interorganizational relationships have different meanings depending on when the situation occurs, with whom and what the goals and motivations are (Harland, Lamming, Zheng & Johnsen, 2001). Interorganizational relationships also vary depending on the risks, benefits and pitfalls (Edelman et al. 2004). Interorganizational relationships develop in different directions depending on how much the firms communicate, share joint resources, and have a cooperative decision making approach. Briefly, these elements become input to how content in a relationship develops.

In addition content that bundles interorganizational relationship constructs differs depending on who is reporting it. Some firms perceive a specific content of a relationship as very important, whereas others perceive the same content as of very limited importance. Some perceive they have many close interorganizational relationships while others define the same relationships as very distant. Some strongly agree upon certain contents as foundations for the relationships whereas others strongly disagree on the same contents (Scott, 2000).

Relationship constructs are thus not descriptive of the firm but general fundamentals of the network that they share. Relationship constructs also have different roles of orders. Sometimes, trust-based relationship constructs influence commitment and then further effect cooperation. Morgan & Hunt (2001) as well as Pesämaa & Hair (2008) identify the order of constructs as “key mediating variables” for trust-commitment theory. They are thus very explicit about emphasizing the order of the construct to build trust-commitment theory.

Some of the literature is not precise about the order of the constructs, much less the specific items that represent a construct. Therefore, many researchers including Morgan & Hunt emphasize that “the model needs further explication, replication, extension, application, and critical evaluation (1994:34). Unfortunately, there is still little interest in replicating studies within social sciences (Easley, Madden & Dunn, 2000). As a consequence of this, research within social science has emphasized creating new measurements instead of attempting to confirm and purify existing models and constructs. Because of the need for replication, this thesis revisits and purifies existing interorganizational constructs.

2.3 A process based framework of how relationships develop

This thesis is based on a metaphorically based diamond framework of interorganizational relationships (see Figure 2). The relationship diamond is developed from both Parkhe (1993) and Wetzels, de Ruyter & van Birgelen (1998). The diamond illustrates different elements of the relationships. Next, Figure 3 presents the actual processes of these elements.

Parkhe (1993) stated that strong relationships are stable and formed for specific reasons (e.g., motives) and express the preferences their partners have. The framework used in this thesis (see Figure 2) is an extension of the Parkhe framework. Specifically, Parkhe (1993) related motives and partner selection to trust and reciprocity. The core diamond framework is similar to Parkhe (1993) but also to Wetzels, de Ruyter & van Birgelen (1998) that also empirically examined ideas before interaction between partners actually takes place. Wetzels, de Ruyter & van Birgelen (1998) proposed that during the stage before interaction takes place, referred to as awareness, partners prepare themselves for interaction. This stage is followed by a stage of trial and error (Wetzels, de Ruyter & van Birgelen, 1998). Furthermore the process of developing relationships moves into a stage of expansion where partners start to form trust and the true character of the relationship (Parkhe (1993; Wetzels, de Ruyter & van Birgelen, 1998). Finally, Wetzels, de Ruyter & van

Birgelen (1998) emphasize that the ultimate stage of relationships is commitment. The implications of these two studies provided a metaphorically based framework which implies that relationships if successful are long term.

This thesis also considers in accordance with Parkhe (1993) that relationships are preceded by cooperative motives and preferences that suggest a basis for how a partner should be selected. The next stage then is expansion of the relationships in which friendship, interpersonal commitment, reciprocity and trust are included. This thesis further proposes that interorganizational commitment is the ultimate stage but it also is complemented by cooperation and loyalty.

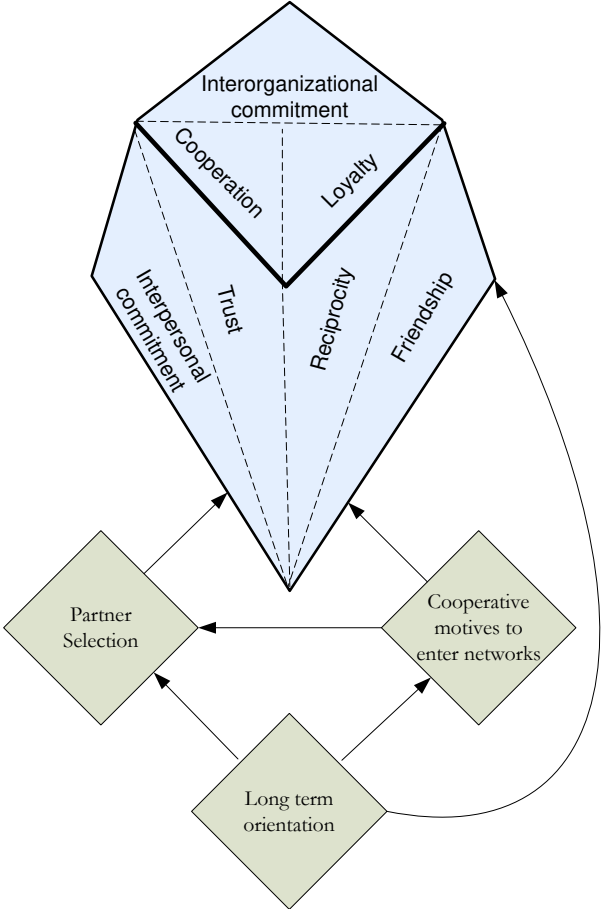


Figure 2: The relationship diamond

Specifically, Wetzels, de Ruyter & van Birgelen begin their study by saying that relationships “do not just emerge or exist” (1998:407) but evolve through a

process. Relationships can therefore be considered as a process. Their process had following stages:

1. Relationship starts by *awareness* which means recognizing a feasible partner. At this stage there is no interaction.
2. The second stage the relationships develop into *exploration*, which is based on true interaction and permeated by trial and error. At this stage relationships are examined if it involves obligations or just benefits.
3. In the third stage, *expansion*, relationships develop into interdependence. Wetzels, de Ruyter & van Birgelen (1998) emphasize that the biggest difference between expansion and exploration is that the partners know to what extent they can trust other partners and what elements of the relationship they are less satisfied with.
4. Finally, Wetzels, de Ruyter & van Birgelen (1998) propose that relationships can develop into the most preferable level which is commitment. They say that at this level the relationships are based on concrete pledges that give continuance to the relationship.

This thesis proposes a similar process view and considers implications from both Parkhe (1993) and Wetzels, de Ruyter & van Birgelen (1998). The process of relationships (see Figure 3) is thus a combination of both Parkhe (1993) and Wetzels, de Ruyter & van Birgelen (1998). The framework contains five stages that involve a long term orientation, which takes place throughout the whole process, and is decided upon before interaction takes place (Wetzels, de Ruyter & van Birgelen, 1998). The second stage of the process involves cooperative motives to enter interorganizational networks (see Figure 3), which also are chosen before interaction takes place (Parkhe, 1993). The third stage of the relationship development process involves preferences upon which partners are selected (see Figure 3) and also commences before actual interaction (Parkhe, 1993). The fourth stage of the process is expansion of the relationship (see Figure 3) in which the relationship takes the form of friendship, interpersonal commitment, trust and reciprocity (Parkhe, 1993; Wetzels, de Ruyter & van Birgelen, 1998). The fifth stage is based on making the relationship enduring, which has consequences on the future and involves stability and maturity (see Figure 3). During this final stage, the relationship includes interactions, but also shows a propensity for enduring the relationship based on specific intentions and promises. This stage is therefore proposed to also include interorganizational commitment (Wetzels, de Ruyter & van Birgelen, 1998), cooperation (Pesämaa & Hair, 2007; Eriksson & Pesämaa, 2007) and loyalty (Pesämaa, Örtqvist & Hair, 2007). This process moves, therefore, from no interaction to more explicit interaction. It should also be emphasized that relationships may not last forever and can also take other directions. The process model is thus only one suggestion of a feasible direction of relationships.

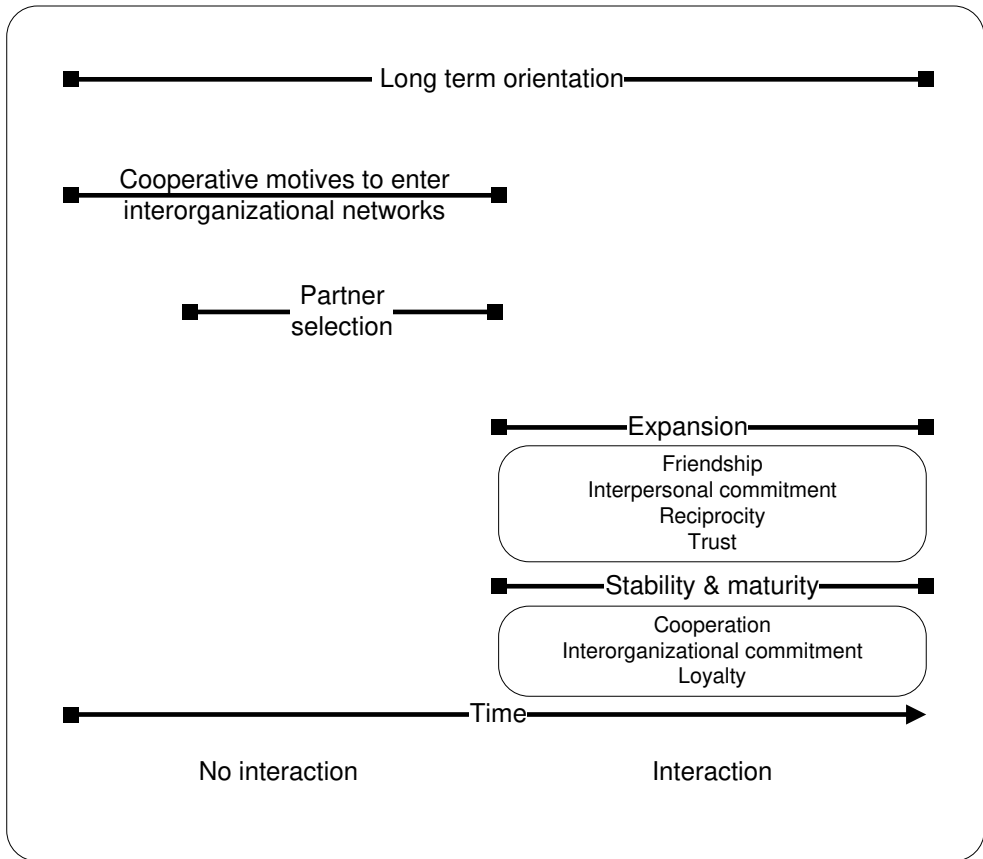


Figure 3: The process of how relationships develop

To obtain insights into the literature on development of networks, a search was performed on commitment (from 1986 to present). The reason commitment was selected as a key term for this search was that many scholars, including Andersson & Weitz (1992); Morgan & Hunt (1994); Wildeman (1998); Wetzels, de Ruyter & van Birgelen (1998); Mavondo & Rodrigo (2001); Gounaris (2005); and Sharma, Young & Wilkinson (2006), point out that this term more than others reflect the success of a relationship. The search was conducted in September 2007 and yielded 23,859,814 scientific peer reviewed articles, of which the article by Morgan & Hunt (1994) had 891 citations. Thus, their findings are considered the most influential work on commitment in business related studies. Following this overall search a narrower search was undertaken. The more specific search was made on “interorganizational commitment” (from 1986 to present). This search yielded three studies. Of these three studies only one, Mavondo & Rodrigo (2001), conceptualized interorganizational commitment and moreover included other types of

relationship constructs related to interorganizational commitment. Their instrument on commitment also differentiated between interpersonal and interorganizational commitment, which makes their research important for the proposed diamond in this research. In addition, Portes (1998), one of the most cited articles in this field, argues that commitment, reciprocity and trust are key elements of cooperation. Moreover, Wildeman (1998) examined motives and partner selection and proposed that many lasting relationships are represented by commitment.

The interorganizational relationship process is represented in several of the articles appended to this thesis (see articles 4-10). These articles include different frameworks describing how contents in interorganizational relationships develop. In addition to this metaphorically based framework all constructs are assumed to have a direction supported by several arguments (Pesämaa, 2007a).

The first argument proposed here is that firms search for something particular. This *search* emerges in the motives expressed by firms when entering networks. Motives are therefore related to the way partners are selected. Specific business related motives are likely to affect the way partners are selected and the kind of access to resources the firms are likely to develop. Partner selection likely directly affects the kind of relationships that ultimately are established between reciprocity, trust and interorganizational commitment (Pesämaa, 2007a).

A second argument for the proposed sequence between the constructs is that firms *avoid* certain situations they do not want to be involved in (Lundbäck, 2005). This avoidance thus expresses certain motives in searching for partners and establishes certain relationships to avoid situations in which they do not want to be involved. One typical example is that a firm may join a certain network to achieve a certain type of legitimacy and reputation.

A third argument is that firms want to *limit their uncertainty* (Chronéer, 2003). It is assumed that they limit uncertainty by entering networks with specific motives, selecting certain partners and also by establishing relationships. An example here is loyalty where firms minimize uncertainty by associating themselves with partners known to be loyal.

A fourth argument is that firms are trying to *minimize risk* (Pesämaa, 2007a). This argument has the same logic as the previous one. When firms know exactly what they will accomplish then they know what to expect. Motives to enter networks, partner selection and certain contents in relationships are adopted to minimize risk and gain further knowledge of what to expect. An example here is that firms enter networks to share risks and they search for the kind of partners that do this best.

A fifth argument is *awareness*. The firms are persistent about finding routines and plans that worked in the past and which they have perfected (Audia, Locke & Smith, 2000). When the same routine applies a second time as good as the first, then they know that this will more likely also work the next time. Hence, the firm establishes a record of what works and what does not. By doing so they identify motives they feel confident with and partners they are familiar with (Gulati, 1995). In addition they also pursue trust if trust worked in the past. Trust is therefore assumed to breed more trust (Morgan & Hunt, 1994) and make the firm aware and persistent about those routines that work in terms of their interorganizational relationships.

A sixth argument is that individuals in firms establish a particular kind of relationships for *social reasons*. This means that individuals enter certain networks because they like the individuals in that network and therefore select partners they like the most. The interpersonal part is sometimes underestimated but the fact that conflicts can ruin many potentially strong relationships makes this aspect very important in developing knowledge in this area.

A seventh argument is that firms want to approach and come closer to certain other firms or industries in selected geographical areas. *Proximity* is pursued because it often creates efficiency in operations.

A final argument is that network members enter them in order to “maximize their rewards and minimize their costs” (Bagozzi, 1974: 77).

Based on these arguments this thesis also emphasizes a process perspective where all constructs were given a specific sequential order. The proposed sequential order in this thesis is presented in section 2.4 – 2.8 that follows.

2.4 Long term orientation

The first proposed stage of the process is long term orientation. This part of the process has consequences both before interactions take place and after the relationship is undertaken. Long term orientation (Wetzels, de Ruyter & van Birgelen, 1998) affects the whole process (see bottom of Figure 2). Assuming that a firm is about to commence a relationship that will give them certain advantages it is also important to consider how this relationship will affect the firm in a long run.

This thesis particularly considers that cooperative strategies (see appended article 4) hinge on a long-term orientation based on good experiences involving cooperation (Wetzels, de Ruyter & van Birgelen, 1998, Gulati, 1995; Gulati & Gargiulo, 1999) and the belief that cooperation will lead to productive results (Axelrod, 1984). These realities reflect the fact that firms are not likely

to pursue strategies based on relationships that offer few benefits. Thus, expectations are based on favorable earlier experiences and anticipated future value.

Managers pursue long-term strategies even if no immediate benefits are promised because they believe it is important for the performance of their organization. This perspective assumes managerial approaches are based on more than just daily contacts requiring time and effort to develop (Gundlach, Achrol & Mentzer, 1995; Wetzels, de Ruyter & van Birgelen, 1998; Gounaris, 2005).

Long term orientation can also have negative outcomes. For example, opportunities may be lost because of obligations to remain loyal. Furthermore loyalties can hamper creativity and encourage routine patterns because thinking outside the box challenges the fundamentals on which the relationship is based. Different contextual circumstances can discourage a long term orientation and lower trust (Gounaris, 2005), which increases the need to control all decisions and makes the situation more difficult. The absence of a long term orientation becomes crucial in situations where firms pursue complex tasks requiring more time. Relationships involving high personal and collectivistic investments also demand maintenance and thus long term orientation.

Empirical evidence supports the existence of a relationship between long-term orientation and commitment (Gulati, 1995; Pieper, 2007). One way long term orientation is reflected is frequency of interaction, which depends on the length of the relationship (Nicholson, Compeau & Sethi, 2001) and repeated success that leads to trust (Gulati, 1995). This explains the high cost to replace relationships developed over a long period of time.

For theory development purposes, this thesis hypothesized that long term orientation is very important for tourism firms. Long term orientation is something that influences friendships, loyalty, trust, commitment and cooperative strategies (see appended article 4 – Pesämaa & Hair, 2007).

2.5 Cooperative motives to enter interorganizational networks.

In criminology motives are examined closely because they expose the reasons a person has for criminal action. The motives thus explain why the criminal act occurs in a particular way. Motives are also considered important in business related studies – especially if there is an interest in knowing why the firm acts in a certain way. Motives can expose the direction firms are heading as well as why they ended up in a certain position. Motives are therefore important in

the way relationship processes develop. Motives are typically developed before interaction has taken place. The first stage of the process before interaction is when the firm becomes aware of what it wants to achieve and accomplish. This thesis therefore suggests that a study of the motives may generate information about what a firm wants to achieve. Therefore, cooperative motives to enter networks (Parkhe, 1993) are proposed to reflect the second stage and refer to the process where firms determine what they are after and what they want to achieve through becoming part of the interorganizational network (See bottom right of Figure 2).

Cooperative motives are important to consider because they reveal the firm's intentions and objectives. The motives thus also suggest the direction toward which the relationship will develop. This thesis proposes that hard and soft cooperative motives will have an effect on the way partners are selected (see appended article 9-10). In addition, in this stage other activities that reflect motives are included. These activities are represented in the way firms in the construction industry pursue partners early in the process, the so called pre-stages, in order to identify and select certain types of partners (see appended article 6).

Earlier studies on cooperative motives also suggested that motives are associated with the preferences expressed in selecting partners. These studies did not measure this association between motives and partner selection. But they are still considered important in framing this study. In earlier studies there were strict theory-based combinations between motives and partner selection (Parkhe, 1993) as well as empirical combinations (Volery, 1995; Wildeman, 1998). There also was a developed framework of hard and soft cooperative motives and the types of partner that were to be targeted (Friedman & Kalmanoff, 1961; Rosenfeld, 1996; Huggins, 2002).

This thesis hypothesized a link between motives and partner selection. The results suggest that hard and soft motives have different roles in relationship development (see appended articles 9-10).

2.6 Partner selection

Another important issue in business related studies involves preferences for selection. Selection is important and could be selection of goals but also selection of partners, as is studied in this thesis. The process of selection is important because it illustrates what is preferred. Exposing a partner in front of another may also tell why this partner is important and in the long run tell something about why a group overcomes challenging situations better than others. As with motives partner selection occurs before interaction has started, but expresses a more detailed plan for the relationship than motives

do. Partner selection is thus part of the process before interaction has taken place (Parkhe, 1993). At this stage of the process the firm is assumed to figure out what specific partners they want to target and what preferences are more important than others (see also bottom left of Figure 2). Partner selection comes from traditional strategic management literature in which it is assumed that firms perform selections carefully and for strategic reasons (Levienthal & March, 1993; Rumelt, Schendel & Teece, 1991). This thesis follows this assumption and also proposes that selection of partners is executed carefully. The principle for this is that partner selection is considered before other choices, which is called the principle of alternative thinking.

Similar to motives, partner selection has been extensively studied in earlier literature. For this thesis no study was found that establishes a clear link between partner selection and other interorganizational relationship constructs. One study (Huang, 2006) hypothesized and found relationships to performance and that such selection can reduce contextual uncertainty and help firms cope with risks. But a link to performance has also been important for other scholars in this field. Geringer (1991) included a task construct and found that it was related to performance while Geringer & Herbert (1991) found that more developed interpersonal skills were beneficial for performance.

Based on earlier findings this thesis has elaborated extensively on the role of partner selection on behavioral consequences other than performance. Thus, partner selection is proposed as a pre-stage to how interorganizational relationships are developed. Partner selection is also examined in both the construction (see appended articles 5-6) and tourism industries (see appended articles 7, 9-10).

2.7 Expansion

As part of the process of relationship development, there is a stage of expansion (Wetzels, de Ruyter & van Birgelen, 1998). In physics expansion refers to the gap between materials prior to the point of detonation. Expansion in relationships also starts when relationships begin and continues until they are locked into definite positions. In relationships between organizations expansions are typically recognized by members in terms of the knowledge they have of what to expect from friendships, trust, obligated exchanges and personal commitments. In addition, firms assume they will learn the advantages and disadvantages of the relationship. This fourth stage of the process thus assumes that interaction takes place. The stage involves friendship, interpersonal commitment, reciprocity and trust (Mavondo & Rodrigo, 2001; Pesãmaa & Hair, 2007).

2.7.1 Friendship

Personal relationships based on friendships are expansions of individuals, within or between firms, working together and sharing time, particularly leisure time. Friendships can stimulate good communication, increase loyalty, trust and commitment but discourage opportunism (Zaheer, McEvily & Perrone, 1998). That is why relationships often are considered as important as the product or services a company sells. When buyers choose products or services the qualities might be similar, but the organizational reputations different. Organizational reputation extends to operational levels where coordinating tasks through invisible friendships can be decisive in winning buyers (Ingram & Roberts, 2000). As an example, when a buyer first becomes aware of an invisible friendship network they might say "So this is how it works." Thus, relationships can be as important as product or service qualities.

Friendships, however, involve more than being aware of other friends' feelings and the significance they have for the future development of the relationship (Mavondo & Rodrigo, 2001). Friendships, therefore, must be considered from a broader perspective. Being a friend does not necessarily include knowledge of what constitutes the friendship, because we may simply like each other. A consequence of developing friendships is that persons socialize outside work and therefore also have access to information and how decisions are made (Mavondo & Rodrigo, 2001). This access directly affects the ability to talk openly as friends and to consider the partner's feelings before making an important decision.

When changes take place partners also change and individuals within a firm may lose friends or they may become more distant. Socializing outside work, which is something important for friends, can also affect the job and create conflicts that relate to friendships and not the professional situation. Thus, a negative side is that friendships as in any relationship involve conflicts and disappointments. The negative side also includes situations where someone feels pressure when one person exerts control over another because of their stronger position. Clearly this influences the development of relationships and results in conflicts and disappointments. Friendship also has positive consequences such as better ideas and improved discussions. This bundled construct of friendship is important in examining cooperation as a strategy.

Cooperation between friends is effective in completing demanding tasks such as radical product change (Johannisson, 1990) and in coordination of sales activities (Ingram and Roberts, 2000). In fact, lack of friendships results in poor access to resources and information (Maslyn & Uhl-Bien, 2001). If cooperation and information sharing is important to continuing the relationship, then loyalty, trust and commitment must be considered. For the purpose of understanding how relationships develop, other studies regarding the role of friendship were pursued in a search. Literature was found indicating that

friendship can lead to loyalty (Mavondo & Rodrigo, 2001) interpersonal commitment (Ingram & Roberts, 2000; Mavondo & Rodrigo, 2001; Rodriguez & Wilson, 2002) and trust (Ingram & Roberts, 2000; Mavondo & Rodrigo, 2001; Rodriguez & Wilson, 2002).

For theory development purposes it is hypothesized that friendship effects long term orientation, which is also effected by loyalty, commitment and trust (see appended article 4 – Pesämaa & Hair, 2007).

2.7.2 Interpersonal commitment

Interpersonal commitment is a non-formal integrating mechanism for expanding groups (Yoon, Baker & Ko, 1994). Some groups are strongly integrated whereas others have a looser relationship (Yoon, Baker & Ko, 1994). Interpersonal commitment is a value-based relationship developed over a long period with consequences for future decision-making. The relationship includes shorter-term sacrifices as well as those that will be made in the future and involves specific commitments by participating firms. One study of interpersonal commitment (Ingram & Roberts, 2000) found that trust is built in networks through dependencies. The dependencies involved sharing buyers with one another as well as information and decision-making, which elevated the importance of trust and reciprocity. They found that hotels in Sydney used border interlocks. These interlocks in boards of directors perform the function of bridging gaps buyers perceived. An example of this is that one hotel in Sydney passed the guests to another hotel when their hotel was fully booked. In doing so they could handle via interpersonal commitments excess capacity that someone else had within the system of interorganizational relationships. They also found that these exchanges likely reflect how trust is applied in practice.

Interpersonal commitment is an important mechanism developing stronger relationships (Pesämaa & Hair, 2007). It is also found in earlier empirical studies that interpersonally committed partners are more inclined to establish interorganizational commitment (Yoon, Baker & Ko, 1994; Mavondo & Rodrigo, 2001). Mavondo & Rodrigo (2001) tested six different multi-item interorganizational relationship constructs using interpersonal commitment as the gate through which the rest of the constructs developed interorganizational commitment.

Interpersonal commitment was found to mediate the relationship between trust and interorganizational commitment (see appended article 8). Interpersonal commitment, even though many of the authors label it just commitment, is also found to be an important precursor for cooperation (Dwyer, Shurr & Oh, 1987; Morgan & Hunt, 1994; Doz, 1996; Wetzels, de Ruyter & van Birgelen, 1998;

Garbarino & Jonson, 1999; Yilmaz & Hunt, 2001; Varamäki, 2001; Wong & Sohal, 2002).

Therefore, this thesis also proposed and tested whether firms that build interorganizational commitment orient themselves with trust and reciprocity. In cooperative relationships, one result can be interpersonal commitments that restrict the partners in future endeavors and lead to interorganizational commitment. For theory development purposes this thesis proposed interpersonal commitment as a key mediating variable of reciprocity and trust on interorganizational commitment (see appended article 8). In addition interpersonal commitment is proposed as an effect of long term orientation, friendship, loyalty and trust together influencing cooperative strategies (see appended article 4).

2.7.3 Reciprocity

In interorganizational networks reciprocity is a core activity (Portes, 1998). Reciprocity is the practice of give and take (Pesämaa, Hair & Jonsson-Kvist, 2007) and typically expands norms of exchange by making individuals feel obligated to return favors (Mavondo & Rodrigo, 2001). Portes (1998) suggests reciprocity is crucial for any local development. For local destinations, tourism networks perform an important function by coordinating activities. Many times these myriad of activities between different firms such as hotels, restaurants, bars, ski resorts, camps and guides, are sustained through personal relationships.

Personal relationships are not based on reciprocity alone. But reciprocity is one way of maintaining those relationships. For example, when firms provide favors they typically expect others to do the same. Reciprocity also depends heavily on the context (Portes, 1998) and therefore varies. In some contexts, for example cultural or immature relationships, reciprocity is a strong element demanding immediate returns. But in other contexts reciprocity operates by emphasizing future returns and does not imply equal initial returns. Reciprocity is a mechanism in a person's cognitive system (i.e., values, ideas and experiences) that collects information, facts and feelings concerning how past exchanges were carried out and uses them to improve the expected value of current decisions and to determine future commitments.

Studies have shown that reciprocity leads to commitment (Kumar, Scheer, & Steenkamp, 1995b; Mavondo & Rodrigo, 2001) and has an effect on trust (Kumar, Scheer, & Steenkamp, 1995a; Zaheer & Venkatraman, 1995).

For theory development purposes this thesis examined reciprocity as one mechanism of give and take (see appended article 3). In addition, reciprocity is assumed to be a norm for exchange (Mavondo & Rodrigo, 2001). For

theory development purposes this norm is an intervening variable between trust and commitment (Pesämaa, 2007b, 2007c).

2.7.4 Trust

As in the case of friendships, interorganizational trust expands via individuals within an organization. When two organizations share trust this means they have confidence in each other's behavior. Usually this is developed by having similar values and experiences (Gulati, 1995). Trust is also said to be a matter of risk (Ring & Van de Ven, 1994) because it leverages what you know from before and can therefore be assessed (Lane & Bachmann, 1998). If a firm knows exactly how much to trust, which is indeed difficult, then it also knows what to expect and what risk is associated with the relationship.

Trust is one of the more complex crucial ingredients that organizations have within their control and which they rely upon when entering new relationships (Goel, Bell & Pierce, 2005) as well as in developing cooperative strategies and establishing interorganizational commitments. Trusting someone means you know something and can really expect something. Trust can also work if a firm has a "hold" on a partner. Typically, larger firms can exert control and develop a "hold" on those firms that need their resources and expertise. They can trust the partner because they have the power. However, it is more logical to talk about trust between equal partners and in situations in which trust emerges from a developed process (Gulati, 1995). In this thesis trust is considered a precursor to cooperation, interorganizational commitment and loyalty, but also as the outcome of deliberate motives and partner selection.

Trust involves expectations and can therefore be defined as a matter of risk. This abstraction of trust implies that a firm searches for other partners because they are willing to rely on those that they find confident. Secondly, this implication also suggests there is a degree of vulnerability in the relationship, but that the likelihood of vulnerability decreases when the partner knows more about other partners. Therefore trust is part of a process that develops and becomes stronger as partners receive more information about potential partners in the network. Preferably, they collect this information before they meet but also through keeping records based on their experiences. These records then decrease the amount of uncertainty and thus lead to more stability of relationships. Studies of trust show that it can lead to commitment (Morgan & Hunt, 1994; Wetzels, de Ruyter & van Birgelen, 1998; Medina-Munoz & Garzia-Falcon, 2000; Varamäki, 2001; Ekelund, 2002; Rodriguez & Wilson, 2002; Wong & Sohal, 2002; Mukherjee & Nath, 2003; Björk & Virtanen, 2005).

Developing trust is important for interorganizational relationships. In explaining different typical behaviors (Axelrod, 1984) trust is proposed as one

of the mechanisms that can unsettle an opportunistic behavior in a game (Pesämaa, Hair, Eriksson, 2007). One implication of that study is to examine empirical relationships of how trust evolves from distinct partner selection processes. Trust is viewed as an outcome in that study and was proposed as an outcome of task-related partner selection in the construction industry (Eriksson & Pesämaa, 2007) and the tourism industry (Pesämaa, Örtqvist & Hair, 2007) as well as an outcome of pre-assessed trust in partner selection (see appended article 9-10).

2.8 Stability and maturity

A stable and mature process is typically stronger than it was in the past. This fixed or locked character is also assumed to be present in the final stage of a relationship development (Parkhe, 1993; Wetzels, de Ruyter & van Birgelen, 1998). Stability and maturity is proposed as the fifth stage of the process or relationship development. Practically this stage is best recognized by its consequences on the ongoing process as well as the future. Stability and maturity include three aspects. First, relationships at this stage are typically bound by promises and future intentions that involve operations and resources – that is, by interorganizational commitment (Mavondo & Rodrigo, 2001). At this stage the process can also be characterized by another type of relationship construct that reflects maturity in the relationship and involves shared goals and decisions – referred to as cooperation (Pesämaa & Hair, 2007). Finally, the last proposed stage reflected by a relationship construct is loyalty. This construct is different from the others that characterize the end-stages because the firm protects the relationship with loyal orientations (Pesämaa, Örtqvist & Hair, 2007). These three relationship constructs represent the end-stages of the relationship and are depicted at the top of the diamond in Figure 2.

2.8.1 Cooperation

Cooperation is an important construct when measuring goals and its effect on stable and mature interorganizational relationships (Thompson & McEven, 1958; Phillips, 1960; Fombrun, 1983; Contractor & Loranga, 1988; Marsden, 1990; Doz, 1996; Mavondo & Rodrigo, 2001). But cooperation is not something that just emerges (Gulati, 1995). Firms do not immediately share goals and decisions with potential partners, at least not before interaction take place. In addition, cooperation is something that requires a lot of effort. Axelrod (1984) explains how difficult it is to answer the question of under which circumstances firms are willing to cooperate. Simulation often puts many parameters into models to test and when there are too many parameters a best model cannot be found. Thus, it is possible the model is too complex. In cooperation there are only two choices – to cooperate or not – but

cooperation influences other social parameters which makes the decision to cooperate very difficult.

Conceptually cooperation is a skill that some individuals in cooperating firms develop naturally (Pesämaa & Hair, 2007). Others, however, find it difficult to understand the benefits of working together and may therefore not pursue cooperative relationships. Moreover, cooperation can be conditioned by culture and some cultures are more inclined to establish long term relationships (Nohria & Eccles, 1992). Yilmaz & Hunt (2001) used transaction costs and game theory to explain cooperation based on providing greater benefits than costs. In fact, cooperation diminishes the need to assess risks such as economic pitfalls (Axelrod, 1984) and personal issues (Blau, 1964; Pesämaa, 2008).

Different perspectives necessitate different approaches to cope with associated risk. Blau (1964) believes cooperation is based on personal relations and Gulati (1995) argues that firms balance available choices in terms of their importance and that choices emerge from previous experiences.

Cooperation assumes relationships are strengthened by shared goals, decisions, understanding, flexibility in overcoming difficulties, and communicating to reduce difficulties. Mavondo and Rodrigo (2001) reinforce this view and include other propositions. First, individuals do not pursue cooperative relationships if there is no current or future value. Second, social skills are necessary to establish cooperation. Finally, as cooperation increases common goals are accepted and implemented. Thus, goals no longer predict the relationship itself, but how the relationship is likely to influence cooperation and ultimately strategy development across all levels of the firm. In addition, careful partner selection is assumed to engender cooperation (Geringer, 1991; Eriksson & Pesämaa, 2007).

For theory development purposes cooperation is considered the dependent variable in three separate articles in this thesis. One article is published in a general management journal with data from the tourism industry (Pesämaa & Hair, 2007), a second article is published in a leading journal for the construction industry (Eriksson & Pesämaa, 2007) and a third proposes and validates a model for the construction industry (Pesämaa, Eriksson & Hair, 2007). In three of the appended articles in this thesis (see appended articles 4-6) specific sequential models are proposed and tested for how cooperation develops as a relationship construct between businesses in the tourism and construction industries. In tourism such strategies are proposed to be chosen based on a long-term orientation that pursues relationships through loyalty and friendship, enhanced by trust and commitment in tourism, whereas the cooperative model in the construction industry is more industry cohesive. In the construction industry cooperation between clients and contractors are the result of partner selection based on task-related attributes, which in turn

mediate both incentive-based compensation and limited bid invitation (Eriksson, 2007).

2.8.2 Interorganizational commitment

The next mechanism characterizing a stable and mature process is interorganizational commitment. Conceptually interorganizational commitment secures the relationship with intentions and promises regarding resources. When one organization commits to another organization they typically show an interest that is more than just short term. A firm with such intentions makes promises to invest more resources, decisions and operations in that relationship (Mavondo & Rodrigo, 2001). Typically the organization also makes an effort to have a rewarding relationship that will become a lasting relationship. Therefore, when these attributes of a relationship are evident and indicate lasting relationships, some scholars characterize the relationship as successful (Dwyer, Shurr & Oh, 1987; Morgan & Hunt, 1994; Mavondo & Rodrigo, 2001). But interorganizational commitment does not just emerge, at least not before any interaction take place.

Interorganizational commitment is particularly important in the tourism industry because it demonstrates how success and strength can be achieved by combining the resources of several tourism firms at the destination level (Huybers & Bennett, 2003). Commitment is a key factor in building long-term interorganizational relationships (Morgan & Hunt, 1994; Gundlach, Achrol & Mentzer, 1995; Mavondo & Rodrigo, 2001), an integral component of exchange theory (Cook & Emerson, 1978). Finally, commitment is an established construct in international tourism (e.g., Medina-Munoz & Garcia-Falcon, 2000) as well as in Scandinavian tourism contexts (Björk & Virtanen, 2005).

Interorganizational commitment through social activities leads to collective commitments, which are often important in tourism (Medina-Munoz and Garcia-Falcon, 2000). Tourism firms must rely on other organizations' activities and future plans. These interorganizational dependencies are based on social activities and formalized commitments that involve sharing resources. Sometimes these commitments imply enduring sacrifices because the firms are tying specific resources to ensure the dependencies are fully developed (Gundlach, Achrol & Mentzer, 1995). Commitment thus limits freedom at the firm level, but increases it at the group level by enabling the group to achieve goals that otherwise would have been impossible (Abrahamson, Cutler, Kautz & Mendelson, 1958).

Commitment has been studied in different contexts. Many different conceptualizations of the commitment construct have been used, and it has been measured in different ways (Meyer, Allen & Smith, 1993; Ko, Price &

Mueller, 1997). The measure of commitment used in this thesis is based on Mowday, Porter & Steers (1982) who proposed an integrated framework. This integrative framework is used because the findings can be compared to earlier studies. Interorganizational commitment is proposed to depend on reciprocity and trust (Anderson & Weitz, 1992; Kumar, Scheer & Steenkamp, 1995a; Morgan & Hunt, 1994) and mediated by interpersonal commitment (Mavondo & Rodrigo, 2001).

Based on earlier findings and theory, this thesis has proposed and tested the role of interorganizational commitment. In the ninth appended article a path analysis test was performed. This study was important for exploratory purposes because the sequential linkages between motives, partner selection, trust, reciprocity and interorganizational commitment were established. In addition, the thesis tested and confirmed the importance of interpersonal commitment as a mediator for interorganizational commitment (see appended article 8). In the tenth appended article the linkages from motives, partner selection, trust, reciprocity and interorganizational commitment were refined. This final test also reduced the number of antecedents and consequently changed some of the sequences found in article (9).

2.8.3 Loyalty

Loyalty is another one of the constructs in this thesis that emerges through individuals that act on behalf of an organization. Loyalty is different from interorganizational commitment in the sense that it shows how individuals for the organizations studied are asked to value the importance of not confronting partners in meetings, but instead raising issues in another context. This way of perceiving loyalty also shows a protective character, which emerges when a relationship is mature and stable. This type of loyalty from the perspective of firm performance is developed from Mavondo & Rodrigo (2001) and is by its contents performing the function of protecting the relationship. Such protecting evolves throughout the process. A firm is not just suddenly protecting another firm, there must be a reason and the firms must have some kind of interaction. Therefore, loyalty also is something that develops from trust even though loops of loyalty also may strengthen trust.

For theory development purposes regarding how relationships develop, loyalty is considered an important construct. In an interview performed by "in cites" with Robert Morgan and Shelby Hunt (the most cited article in trust-commitment theory) loyalty as construct was mentioned as one of the future areas of study 10 years from now because it is something different than commitment (In Cites, 2007).

Although friends are enthusiastic about other individuals' ambitions, loyalty protects relationships. Loyalty is task-related in the sense that the situation or action in itself becomes more important. Therefore, loyalty in personal

relationships increases trust and commitment and discourages opportunism (Zaheer, McEvily & Perrone, 1998). Companies that develop strategies to create loyal buyers (Garbarino & Johnson, 1999) and more successful companies have loyal partners (Yilmaz & Hunt, 2001). Replacing a partner may not be negative in the long run but can be risky and costly in the short run. Loyalties are always difficult, and being loyal is based on enjoying the relationship and the context in which it takes place (Gounaris, 2005). In practice, loyalty protects and gives security to current relationships, but loyalties may also discourage change. Loyal individuals are faithful during winds of change and continuously attempt to improve their shared contexts through cooperation. Thus, cooperation enables individuals to “save face”, avoid conflicts and find mutually beneficial solutions.

Loyalty is critical in the process of cooperation, especially in achieving trust and commitment. Loyalty means that during cooperation individuals avoid embarrassing situations or spontaneously confronting friends or partners, and try to minimize difficulties and find agreeable solutions to conflicts. Thus, solving conflicts and finding solutions is central to loyalty. Tjosvold & Sun (2002) reported that loyalty deepens personal friendships based on trust and strengthens cooperative goals, thus avoiding dysfunctional conflicts. Similarly, Morgan & Hunt (1994) found that shared values are important in developing communication, trust and commitment, so that when conflicts do arise they are resolved in a functional manner.

In this thesis and for theory development purposes loyalty is proposed as important for tourism firms (see appended article 7). Loyalty is also presumed to work as something that precedes cooperation (see appended article 4) and as a precursor of trust and loyalty.

“Trust inevitably requires some sense of mutuality, of reciprocal loyalty” (Handy, 1995:48).

Handy (1995) pointed out that loyalty is a mutual process which grows from a reciprocal trust. This part of loyalty is also emphasized in this thesis (Pesämaa & Hair, 2007).

2.9 A reflection of the thesis theoretical perspective

The theory chapter has identified certain constructs that are important for how interorganizational relationships develop and has proposed these constructs represent a process that develops over time.

3. Research methods

This chapter presents an overview of methods, data and research design in this thesis. The methods chapter illustrates how the aim of the study has evoked many options, opportunities and compromises. These options, opportunities and compromises also permeate how the overall methods, data and research design have developed throughout this project.

3.1 Methodology and Research design

This study started with a literature study (see appended article 1-2) and an empirical inquiry of tourism businesses in Östra Norrbotten (see appended article 3). The simultaneous process of theory and an empirical inquiry provided a basis for further studies and the development of a model (see chapter 2). This first stage is denoted with double arrows in the Figure 4 below.

Mitroff, Betz, Pondy & Sagasti state that “scientific inquiries have a beginning, but not all beginnings are the same” (1974:49). They also note that one way to start an inquiry is to start with a prior given reality or problem and then move to a prior or given conceptual model, which further leads to a scientific solution. This proposed systematic approach is similar to this thesis in many ways. Because this thesis included more than one survey and one model I have partitioned the process into several steps (see Figure 4).

The thesis is based on a previously established problem identified through a literature study (see appended article 1) in combination with a pre-study in Östra Norrbotten (see appended article 3). These studies provided input to prepare a questionnaire and model of how cooperation could be examined. Simultaneous to this work, game theory was examined and different scenario outcomes of cooperation were proposed. Once the major ingredients of the problem were mapped, which is what firms need to develop cooperative strategies, theory development continued to specify the more specific characteristics of the model.

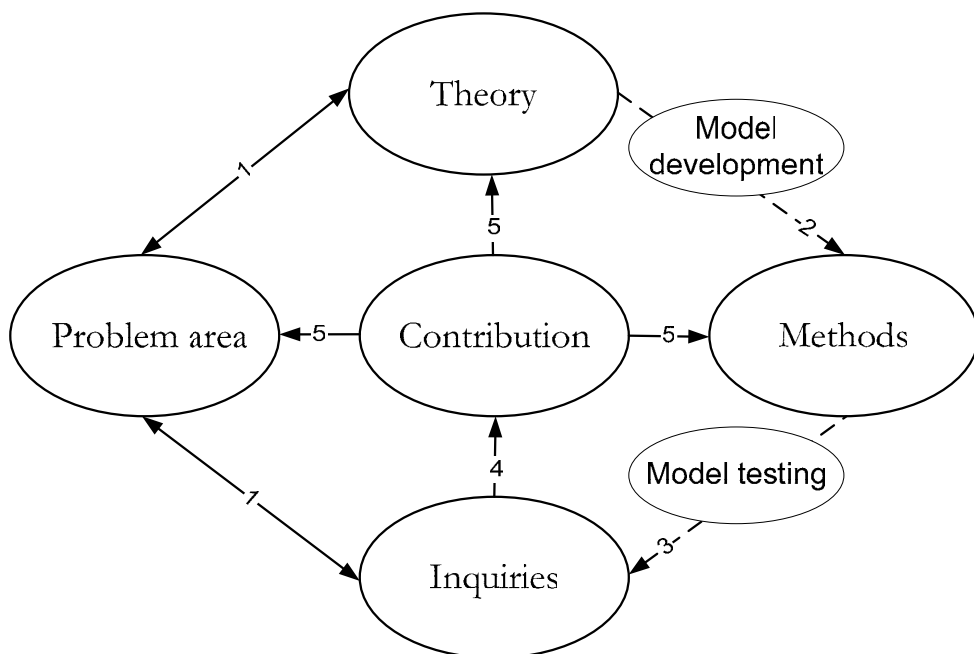


Figure 4: Research Design

At this stage the model development became clearer and the appropriate sample and methodology was identified (see Figure 4; arrow denoted with 2). Once methods were selected a test and purification of models was initiated. At a later stage, new models were tested, first with data collection in tourism in Northern Minnesota and later in the construction industry in Sweden (see Figure 4; arrow denoted with 3). These tested models were then summarized in different articles offering contributions to practitioners and scholars as well as methods and new empirical demonstrations (see Figure 4; arrows 4-5).

3.2 Data collection and instruments

This section of the thesis classifies the networks that were studied in this research. The first pre-study in Östra Norrbotten could be classified as a cooperative group in a given geographical area. The studies in the construction industry could be classified as similar to strategic alliances. Finally, the studies in Northern Minnesota could be classified as strategic alliances that are close to joint ventures and also within a given geographical area, which makes them like an industrial network.

Figure 5 shows that data collection started in 2002 within the tourism industry. This survey was performed in cooperation with my colleague Anna-Karin

Jonsson-Kvist. Later in 2003, I independently coordinated and handed out a survey within the tourism industry in Northern Minnesota (N.Mn). In 2005 a study was undertaken within the construction industry. The survey within construction industry was coordinated by two colleagues, Per-Erik Eriksson and Anders Wennström.

In addition to these surveys, a systematic literature study was completed in the field of interorganizational networks. The literature study was conducted on the basis of a reading manual, which was developed in cooperation with Joakim Wallenklint. This standardized reading manual represented the basis for article 1 of the appended articles. The reading manual can be found in appendix A.

As already emphasized, the second survey was a collaborative work together with my colleague Anna-Karin Jonsson-Kvist. Anna-Karin was interested in the managerial aspects of quality development in tourism firms in Östra Norrbotten, whereas my study aimed at finding support for prerequisites for collaboration. A mail survey of tourism firms in Östra Norrbotten was undertaken. No list of tourism firms in that area was available, but websites of the municipalities in the region listed a total of 103 tourism firms. The 103 firms were sent a questionnaire and 64 usable responses were received (62% response rate). The survey instrument is provided only in Swedish in appendix B and consists mainly of single item question. Two questions were developed into a multi-item reciprocity construct. These questions reflected the importance of give and take in exchange.

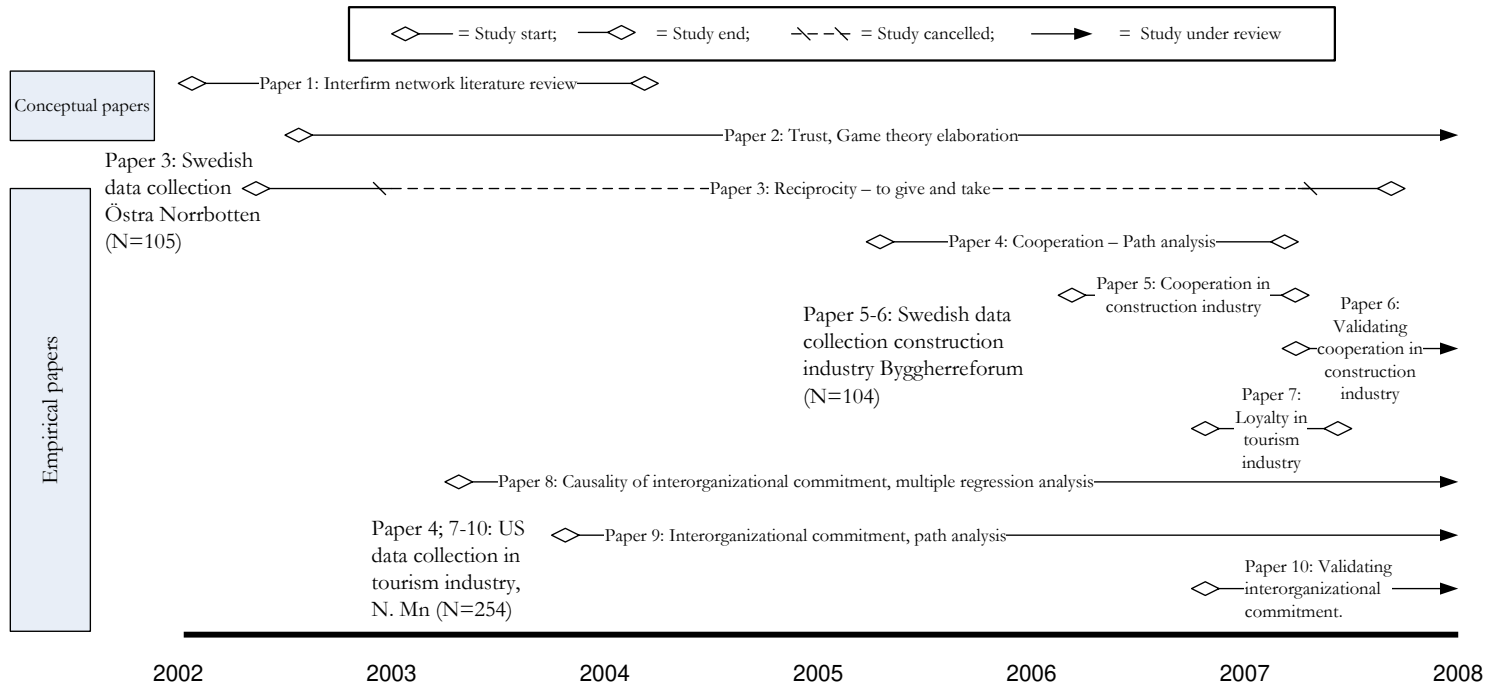


Figure 5: Overview submitted articles process

Next, a survey was conducted in N. Mn. This study was carried out during the spring 2003. N. Mn contains 15 tourism networks. This study focused on the two most successful. In specifying what successful means I selected these based on reputation (i.e., a snowballing sampling) and verified this success with sales data from the two networks. The study used a survey of 254 tourism firms with 99 usable responses representing a response rate of 39 percent. This study was supposed to be complemented with data from Finland and Sweden however the study in Scandinavia only received minor support. Too few responses made it impossible to do any relevant comparisons between the countries. Another problematic aspect of the study was that we wanted data about the sales and employee development. However, the only data that was accessible in the end was sales growth for the overall network, but no data on firm level. A strong point of this study is that the questionnaire was validated by many experts. The cross sectional instrument also passed a lengthy committee review and the selection of networks that represented success were carefully selected by recommendation from regional policymakers and practitioners in N. Mn.

Finally a survey of the construction industry was conducted in 2005. The study was developed by Per-Erik Eriksson and Anders Wennström as principal investigators. I had a chance to comment when this questionnaire were under development. The sample consisted of the 104 members of an association called "The Swedish Construction Client Forum", which have the objective of promoting the interests of construction clients in Sweden. After two reminders, a total of 87 responses were received, representing a response rate of 84 percent of the total sample size. The survey is not provided in this thesis but can be found in Eriksson (2007).

This description of data collection is brief. More detailed information is provided in the individual articles.

3.4 Unit of Analysis

The unit of analysis must be considered in studies of relationships between firms in order to avoid organizational level conclusions being based on personal perspectives (Mavondo & Rodrigo, 2001). Relationships between firms typically involve both the personal and organizational levels. Personal relationships are likely to effect an organization's reputation as well as interpersonal and inter-organizational relationships (Zaheer, McEvily & Perrone, 1998). A simple routine-based task can be very important. A voicemail or email often can influence overall business performance. Furthermore, personal relationships can directly affect firm performance.

Figure 6 describes different types of relationships that could be found between two organizations (O). The first type of relationship in Figure 6 describes the

relationship that goes from inside one organization to inside another. In that case, it does not describe how this “inter” relationship affects the relationship. That kind of relationship could be one or multiple social relationships within a firm, which is a typical type of organization found in interorganizational relationships. In order to describe “inter” relationship it is clearer to distinguish these from organization-to-organization relationships (o-to-o). In this case the organization may share something with another organization with no direct relationship but rather with an indirect relationship (Bagozzi, 1975). The boundaries of the organization are thus important in this understanding. The next part of Figure 6 shows that there is also a relationship that goes from inside one group (G1) of an organization into inside of another group (G2).

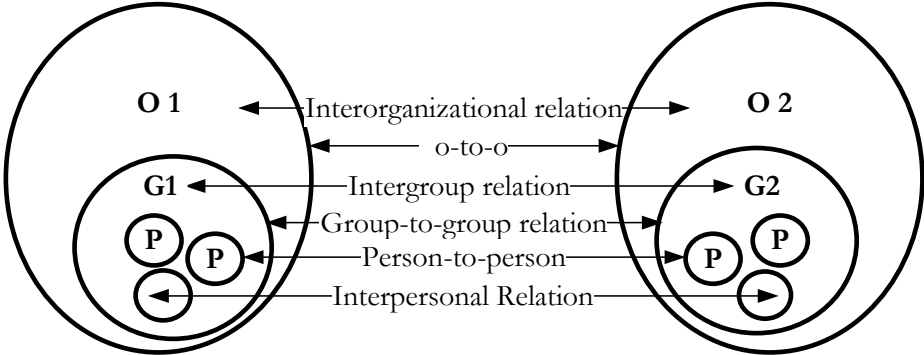


Figure 6: Different relationships between organizations

Next there is relationship that goes from one person to another person. Persons may also belong to the same union, without actually affecting each other directly. On the other hand there are relationships also at a personal level where one person affects another person and furthermore the result of both organizations.

This thesis examines how different cooperative relationship strategies are developed. The relationship strategies are assumed to affect not just a single unit but the whole firm. The unit of analysis is therefore the firm. Respondents for the firm are used as informants for the organization they belong to. In some of the questions respondents indicate how important certain contents of the relationships are for their firm performance. In addition, all of the firms are members of a network and they respond to relationships that they have within that network.

3.5 Nonresponse bias

Surveys are almost always criticized for their response rate and for capturing aspects outside the standardized format. The first study had a 62 percent response rate, the second 39 percent and the final survey 87 percent. In the best of worlds a researcher wants 100 percent response rate but when this is not possible other principles must help to overcome weaknesses.

One principle has been to control if there are differences between different groups, such as males and females. Another principle was to detect whether groups or factors explained most of the variance. This study performed analysis to determine if there were significant differences between different types of groups. No relevant differences emerged. Since this thesis also consisted of three databases and many different variables, I also decided not to report the numerous ANOVAS (i.e., analysis of variance) these controls generated. But, since one basic assumption is to identify where substantial amounts of variance can be explained, it was important to examine paths suggesting meaningful relationships. Some techniques are able to identify even small differences, however, such as when performing validated multi-groups analyses, and these situations can reveal useful directions for future research. Multivariate statistical techniques (see Hair et al., 2003 and Hair et al., 2006) were helpful, therefore, in identifying latent patterns in the data.

3.6 Reliability and validity

In this section some of the concerns and issues confronted in the study are discussed. Reliability and validity were assessed based on the actual empirical conditions and specific statistical requirements that were available.

All of the study instruments and models developed in this thesis were designed to match the empirical situation. Expert persons and several discussions in internal work meetings and external conferences helped to purify the models so that the theory matched the empirical situations.

Most results of this study are generated from surveys. Using surveys also facilitates the use of systematic statistical techniques that are available and can deal with reliability and validity. Validity and reliability are crucial parts of business research.

Another aspect is that these models are sequential models based on cross sectional data. This means questions are asked so the respondents think of a situation in the past and relate it to current and future situations. Thus, the data does not fully represent an actual situation with real sequences. Future studies with a longitudinal design could control and test if there are time lags in the relationships tested.

The models are also general, which means that parts of them are generalizable for future studies in industries other than tourism and the construction industry. The rather general models, however, also limit the study in its ability to express findings at a practical level. Thus, more studies that control for other aspects are needed, such as how conflicts arise. Experimental designs may reach far more into psychological aspects of the individuals and their behavior. Also, additional focus groups may identify more aspects of each proposed constructs.

This study develops scales based on a priori theory. All of the scales reach acceptable levels of reliability according to (Hair, Babin, Money, Samuel, 2003; Hair, Black, Babin, Anderson, Tatham, 2006). The extended studies of cooperation and interorganizational commitment also generate results that validate a model of cooperation in the construction industry and a validated model of the interorganizational commitment process in tourism industry.

In addition appended article six validates the cooperation model in the construction industry and article eight and ten validates interorganizational commitment in tourism.

4. Summary of articles

*T*his chapter presents an overall summary of findings in the thesis, but also a short exclusive summary of each article.

4.1 Overview conceptual articles

This thesis began by mapping 210 specially selected articles which relate to interorganizational networks (see appended article 1). A more detailed summary of this article is provided in section 4.3. Next, the conceptual studies were followed by simulating game theoretical principles on a cooperative scenario. This study is under review at an international journal. This latter article resulted in some important implications of cooperation with regard to trust and reciprocity. A brief summary of this article is provided in section 4.4.

4.2 Overview empirical articles

Figure 7 show an overall picture of all findings. Figure 7 also indicates in what articles these findings can be found. All of these finding relate to the Relationship Diamond framework (Figure 2) and the explicit process (Figure 3) but are described in more detail in each individual article. A brief overview of all empirical articles is provided in section 4.5-12.

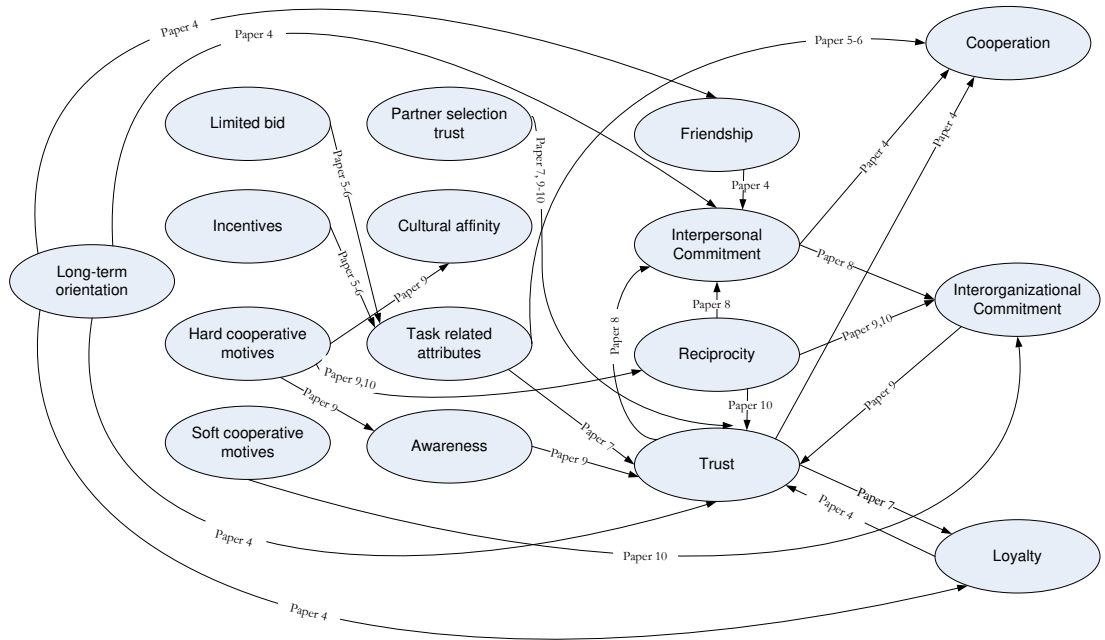


Figure 7: Overview of findings articles 4-10

4.3 Summary of article 1

Name: Interfirm network content analysis.

Author: Pesämaa.

Published in: Working paper No 2004:59 at Industrial Organization, LTU.

Research question: What constitute interfirm networks?

Theme: Collaboration and reciprocity under difficult circumstances.

Objective: To reveal directions of studies within the field of interfirm networks.

Method: Content analysis.

Findings: The field of interorganizational network allow, but also stress use of multiple theories, methods, approaches and unit of analysis.

Limitations: Articles could be selected in a more systematical way.

Further research: More properly set standardized principles of selecting articles may also give other interesting results.

4.4 Summary of article 2

Name: To protect and attract: Firms cooperating in nature-based tourism destinations.

Authors: Pesämaa, Hair & Eriksson.

Published in: Developed from a working paper series and conference on competition. Submitted in October 2007 to *Tourism Culture and Communication*.

Research question: When is a local firm in a nature based tourism destination likely to cooperate with other firms?

Theme: Collaboration and reciprocity under difficult circumstances.

Objective: Our approach to studying nature-based tourism involves developing a prisoner's dilemma that examines how two tourism firms' evaluate the options of competition versus cooperation.

Method: We first review different risk elements by describing a simulated scenario in which two actors (firms in our example) confront a prisoner's dilemma with different options – cooperation and competition.

Findings: The outcome of that scenario demonstrates that cooperation is justified when the benefits of cooperation are large, whether cooperation is about to begin, ongoing, or is about to end.

Implications: Our findings implicate that cooperation is best achieved by having activities coordinated either by a strong, aggressive company or a strategic hierarchical network. Coordination is therefore an important strategy. Lack of coordination runs the risk that one of the goals will gain power over the other, and that a single goal will be maximized while the other receives a 'distant' secondary focus. Hence, neither goal will be fully realized since the two often are at odds with each another. Conflicting goals are better coordinated from a single point (e.g., a formalized strategic

hierarchical network) because this increases the likelihood that both goals will be accomplished more effectively than if the responsibilities are divided and a hierarchal network is not in place.

Limitations: The study is conceptual with only two actors. More empirical demonstrations can underpin these results. More actors involved can also give more nuances to the complexity of cooperation.

Further research: The implications of this study give insights for further empirical research. The scenario describes a firm's options when pursuing a cooperative strategy. Since firms have limited information about how the other firm will act, trusting or cooperating is a risky strategy to pursue. Therefore, we suggest several approaches nature-based tourism firms should consider to reduce risk and encourage cooperation, including:

- Selecting partners carefully.
- Working with contracts, especially if the project is short termed.
- Involves large resources.
- Includes a single decision in which one firm can achieve more than a 50 percent gain.

Carefully selected partners and well defined contracts increase information and help participating firms anticipate the situation. We also propose that nature-based tourism destination policymakers consider:

- Enabling professionals to control resources from a single point.
- Balancing the interests of large firms and small firms.
- Building cooperative situations with small incremental benefits in each situation that entice firms to work cooperatively in longer-term situations.
- Communicating that in complex situations, such as nature-based destinations, cooperation is important.

4.5 Summary of article 3

Name: When collaboration is difficult: The impact of dependencies and lack of suppliers on small and medium sized firms in a remote area.

Authors: Pesämaa, Hair & Kvist-Jonsson.

Published in: Published 2007 in *World Journal of Tourism Small Business Management*, 1: 6-11. (lead article).

Research question: What perceptions do tourism firms in Eastern Norrbotten have to reciprocity?

Theme: Collaboration and reciprocity under difficult circumstances.

Objective: Report empirical findings of a study of dependencies, collaboration and reciprocity among tourism firms in Eastern Norrbotten, Sweden.

Method: Survey 103 tourism firms with 64 usable returning responses (response rate=62%).

Findings: The results indicate that to a large extent dependencies are not evident in firms in remote regions such as Eastern Norrbotten. But, firms that see a need for collaboration are more favorable toward activities involving reciprocity (that is, give and take). But they find this difficult to achieve because most other firms do not see the benefits of collaboration. Tourism firms in this and other remote regions likely could benefit from collaboration but apparently do not understand the implications of firm dependencies or the value of working with other firms through reciprocity.

Limitations: Small sample size and single item measurements with few opportunities to control for other circumstances.

Further research: Study conditions of success and more in depth focus on trust, reciprocity and other mechanisms that generate cooperation.

4.6 Summary of article 4

Name: More than friendship is required: An empirical test of cooperative firm strategies.

Authors: Pesämaa & Hair.

Published in: Published 2007 in *Management Decision*, **45 (3)**: 602-615.

Research question: What can lead to success in networks between tourism firms?

Theme: Path analysis that demonstrate how cooperation is established in tourism networks.

Objective: Examine a proposed six-construct theoretical model of factors that influence cooperative relationships and strategy development.

Method: A theoretical model of strategy development and cooperative relationships was tested. Qualitative research among key experts identified 15 successful regional tourism networks. Two successful cooperative networks were selected based on annual revenues. A total of 254 small and medium sized network members were surveyed from the two networks in Northern Minnesota, USA.

Findings: Strong support was obtained for the proposed model. Hypothesized relationships were tested and the findings were consistent with previous research. Long-term orientation has a positive effect on friendship, loyalty, trust and commitment. Friendship is related to loyalty and commitment, and loyalty is related to trust. Ultimately, trust and commitment engender successful cooperation. The model can be used as a guide to strategy development at different levels in an organization. The research supports a greater emphasis on establishing relationships using loyalty, trust and commitment to develop successful strategies. But relationships based on friendship also can be an important consideration in strategy development.

Implications: Developing relationships can be used as a planning component for hierarchical strategies. Loyal relationships are more important than relationships based on pure friendship.

Limitations: Small sample size and cross sectional data.

Further research: Validate the model and purify the constructs. More studies also needed that consider other aspects of relationships.

4.7 Summary of article 5

Name: Modelling procurement effects on cooperation.

Authors: Eriksson & Pesämaa.

Published in: Published 2007 in *Construction Management and Economics*, 25 (8): 893-901.

Research question: What elements in clients' procurement procedures facilitate the establishment of cooperation and trust in their relationships with contractors?

Theme: Cooperation in construction industry.

Objective: Theoretically deduce and empirically test a model of cooperation in construction industry.

Sample: The sample consists of the 104 members of an association called "The Swedish Construction Client Forum", which have the objective of promoting the interests of construction clients in Sweden. After two reminders, a total of 87 responses were received, representing a response rate of 84 percent of the total sample size.

Method: Survey.

Findings: We found support for the idea that partner selection based on task-related attributes is positively influenced by both incentive-based compensation and limited bid invitation. Furthermore, clients that based their selection on task related criteria were more likely to establish cooperation than trust in their relationships with contractors.

Implications: Our model has verified that early involvement of contractors, limited bid invitations, incentive-based compensation and task-related attributes together affect trust and cooperation in client-contractor relationships.

Limitations: Small sample size. The study is a path analysis with limited knowledge of the validity of the study. The power from the structural equation model is not fully obtained.

Further research: Validate the model and purify the constructs. More studies also needed that take into account other aspects of relationships between contractors and clients in construction industry.

4.8 Summary of article 6

Name: Validating a model of procurement in the construction industry.

Authors: Pesämaa, Eriksson & Hair.

Published in: Submitted in August 2007 to *Journal of Engineering and Technology Management*.

Research question: Can improved procurement procedures enhance the likelihood of cooperative relationships and ultimately improve construction project outcomes?

Theme: Cooperation.

Objective: Validate and test a model of cooperation based procurement in construction industry.

Sample: The sample consists of the 104 members of an association called "The Swedish Construction Client Forum", which have the objective of promoting the interests of construction clients in Sweden. After two reminders, a total of 87 responses were received, representing a response rate of 84 percent of the total sample size.

Method: Cross-sectional multi-item data from a survey collected in construction industry in Sweden.

Findings: This article extends a previously reported model by purifying the results to be consistent with additional validation criteria. Nomological, convergent and discriminant validity are supported. The article also concludes that task related attributes significantly mediate two simultaneously important pre-procurement processes (i.e., incentive-based compensation and limited bid invitation) on cooperation.

Implications: Our findings thus suggest that cooperation, which is important in the governance of complex and uncertain construction projects, can be established through cooperative procurement procedures. Hence, construction clients should be encouraged to include incentive based compensation and limited bid invitation coupled with careful partner selection techniques as a means for increasing effectiveness and enhancing cooperation during concurrent engineering and construction processes.

Limitations: Small sample size.

Further research: More studies also needed that take into account other aspects of relationships between contractors and clients in construction industry.

4.9 Summary of article 7

Name: It's all about trust and loyalty: Partner selection mechanisms in tourism networks.

Authors: Pesämaa, Örtqvist & Hair.

Published in: Published 2007 in *World Journal of Tourism Small Business Management*, 1: 55-61.

Research question: Does expected partner or task related criteria affect how trust and loyalty is developed between tourism firms?

Theme: Loyalty and trust in cooperative tourism networks.

Objective: Test the effect of trust and task related expectations on trust and loyalty.

Method: Survey to 254 tourism firms I N. Mn, USA.

Findings: Consider that the firms represent a wide range of unrelated products, all important for one need – the tourists in that area. Loyalty orientations can in such a context advance our understanding and explanation of how different firms pass on their excess capacity to loyalties within the local network. This study also emphasizes the importance of firms having a strong social back up. This article also opened a gap of how partner selection expectations relate to experienced trust, which in turn has a detailed role in forming loyalty.

Limitations: Small sample size. The study is a path analysis with limited knowledge of the validity of the study. The power from the structural equation model is not fully obtained.

Further research: Validate the model and purify the constructs. More studies also needed that take into account other aspects of relationships between tourism firms in peripheral areas.

4.10 Summary of article 8

Name: Cooperative strategies for improving the tourism industry in remote geographic regions: An addition to trust and commitment theory with one key mediating construct.

Authors: Pesämaa & Hair.

Published in: Forthcoming 2008 in *Scandinavian Journal of Hospitality and Tourism*, 8(2).

Research question: “What factors lead to interorganizational commitment in remote tourism destinations?” and “What are the relationships between the factors?”

Theme: Test and validate mediation of interorganizational commitment

Objective: Expand, empirically test and confirm a theoretical model of interorganizational commitment.

Method: Survey to 254 tourism firms I N. Mn, USA.

Findings: Six out of seven hypothesized relationships were confirmed the theoretical model is validated, for the most part. The results show that interpersonal commitment fully mediates trust but not reciprocity. Thus reciprocity is directly related to interorganizational commitment and not mediated by interpersonal commitment. These results are for the most part consistent with our proposed theory. We believe trust is mediated by

interpersonal commitment because trust emerges from and relies on personal relationships. Thus, high levels of trust interact with strong interpersonal commitments to enhance interorganizational commitment. The fact that reciprocity is not mediated by interpersonal commitment, as our theory hypothesized, suggests that this type of behavior depends more on economic considerations (lower costs, wider assortment of products/services, higher profits, etc.) than on personal relationships. That is, reciprocity motives and expectations are more strongly influenced by perceived economic benefits than personal commitments, and therefore directly lead to interorganizational commitments. This article also demonstrates high validity and reliability.

Implications to practitioners: The findings demonstrated that the relationship between trust and interorganizational commitment is in fact mediated by interpersonal commitment. We also confirmed that reciprocity is directly related to interorganizational commitment, and is not mediated by interpersonal commitment. Thus, tourism firms should develop cooperative strategies in their networks by focusing on enhancing interpersonal commitment through trust, thereby ultimately helping to strengthen interorganizational commitment. At the same time, tourism firms must understand that reciprocity strategies are also important but more so in long-run efforts to enhance interorganizational commitment.

Limitations: One limitation is the potential under-specification of the models tested. It is possible therefore that the theory could be better explained by some other variable not included. A second limitation is the study used self-report measures and the respondents may have interpreted questions differently than intended or may have been influenced in some way by the structure or format of the questionnaire. Third, this is a cross-sectional study and likely would benefit from a longitudinal approach.

Further research: Validate the model and purify the constructs. More studies also needed that take into account other aspects of relationships between tourism firms in peripheral areas.

4.11 Summary of article 9

Name: Against the odds: Building interfirm commitment under trying circumstances.

Author: Pesämaa.

Published in: Submitted in June 2006 to *Journal of General Management*.

Research question: How does cooperation in successful networks evolve?

Theme: Path analysis of different determinants that link to interorganizational commitment.

Objective: Test the effect of hard and soft cooperative motives on different partner selection criteria and their effect on trust, reciprocity and Interorganizational commitment.

Method: Survey to 254 tourism firms I N. Mn, USA

Findings: Hard cooperation motives significantly guide partner selection in the network and that trust and reciprocal consequences have major roles in building committed inter- organizational relationships. Soft cooperative motives seem to be of concealed and limited importance.

Limitations: Small sample size. The study is a path analysis with limited knowledge of the validity of the study. The power from the structural equation model is not fully obtained.

Further research: Validate the model and purify the constructs. More studies also needed that take into account other aspects of relationships between tourism firms in peripheral areas.

4.12 Summary of article 10

Name: The process of interorganizational commitment.

Author: Pesämaa.

Published in: Submitted in June 2007 and currently under revision to resubmit to *International Journal of Tourism Policy and Research*.

Research question: How does the process of interorganizational commitment develop between tourism firms?

Theme: Validate the process of Interorganizational commitment.

Objective: This article describes and tests a model of interorganizational commitment. The model is based on six multi-item constructs with 19 variables.

Method: Survey to 254 tourism firms in Mn, USA

Findings: Hard cooperation motives significantly guide partner selection in the network and that trust and reciprocal consequences have major roles in building committed inter- organizational relationships. Soft cooperative motives seem to be of concealed and limited importance.

Implications: This article expands research on cooperative relationships in successful networks. First, the study validates proposed measurements associated with interorganizational commitment. Next, the article contributes to extant research on how interorganizational commitment is formed. Three of seven initial propositions were confirmed and two additional relationships were also identified. The criteria of convergent, nomological and discriminant validity are all met, and the measurement aspects of the model indicate high validity and reliability.

Limitations: Small sample size.

Further research: More studies should take into account other aspects of relationships between tourism firms in peripheral areas. Longitudinal studies and studies of the model in other contexts are also needed

5. Conclusions

The conclusions summarized in this section emerged from an extended period of work. Other more specific conclusions are included in the appended articles. The thesis posed a comprehensive question and therefore a complete answer is not possible. The answer more complete today, however, than was true five years ago. This thesis asked: how do relationships in interorganizational networks develop?

A theoretically based process perspective was deduced to answer this question. This process perspective included five stages. The first stage postulated that long term orientation is an assumption that starts before interaction takes place and follows the process as long as it continues (Wetzels, de Ruyter & van Birgelen, 1998; Pesämaa & Hair, 2007). The second stage is motives, which occur before interaction take place (Parkhe, 1993). A third stage comprises the preferences upon which partners are selected. This part of the process is also present before interaction take place. The fourth and fifth stages emerge when interaction takes place. There is a small but important difference between the fourth and fifth stages. The difference is between when relationships develop from expansion into stable and mature. The fourth stage is developed from Wetzels, de Ruyter & van Birgelen (1998), who characterize relationships at this stage as involving friendship, interpersonal commitment, reciprocity and trust. The fifth stage is also partly based on Wetzels, de Ruyter & van Birgelen (1998), and proposes that relationships between firms are tied to promises and intentions, which represent interorganizational commitment (Mavondo & Rodrigo, 2001). The fifth stage is examined by suggesting that an ultimate outcome of relationships consists of shared goals and decisions that can be measured by the cooperation relationship construct. In addition, the thesis proposes that the relationship is bound by and can be measured with the loyalty relationship construct. Finally, relationships are complicated and include all of these aspects if they are sustained over time. In order to answer this question outcomes are provided for each stage based on the conclusions that emerge from the particular stage. In certain stages these conclusions also generate implications for both firms and future research.

5.1 Long term orientation

The first answer to the question of how relationships develop in interorganizational networks is related to the first stage – long term orientation.

The basis for this answer is the conclusion that long term orientation is something important that begins before the interaction takes place and continues until it is executed. The opposite, short term orientation, also exists, since many relationships in firms are treated as transactions with no direct consequences on their long term objectives. Such short term relationships are unlikely to expand into either trust or committed relationships. Therefore, when considering long term orientation this thesis has examined different roles these relationships can have. The discussion has defined relationships as interorganizational, which means they are developed from inside one organization to inside another. It is also assumed and demonstrated that these inside relationships are consequences of the long term orientation of firms. The thesis thus postulates that development of relationships takes time and effort. Specifically, in appended article 4 long term orientation is shown to significantly affect several of the relationship constructs, such as friendship, loyalty, trust and interpersonal commitment. Thus, the first answer to how relationships develop is that building interorganizational relationships takes time. Hence, long term orientation is something that managers sometimes underestimate and which in some cases results in high failure rates when building interorganizational relationships. These findings are consistent with earlier studies (see e.g., Wetzels, de Ruyter & van Birgelen, 1998).

5.2 Cooperative motives to enter interorganizational networks

The second answer to how relationships in interorganizational networks develop is related to the stage in which firms have specific motives. As in the earlier stages this answer is based on certain conclusions.

The first conclusion that can be drawn postulates that motives are something that occur before interaction takes place. A second conclusion that represents a proposed relationship at this stage is that motives comprise what firms expect to achieve by entering the interorganizational network. The assumption is that these motives express a reason or a compelling force to make decisions in a certain direction toward certain network members. The motives thus express the direction in which the relationship is likely to develop. This thesis proposed and found that different types of cooperative motives – soft motives versus hard ones – have different roles. These findings support the notion that cooperative strategies include both persistent approaches (Audia, Locke & Smith, 2000) as well as initial ones. A third conclusion in this stage is empirically

generated and assumes that if strategies worked in the past they will likely also affect future motives (see appended article 9-10). A fourth conclusion, which is also empirical is firms that matched their needs and interpersonal skills well in selecting partners will likely continue to pursue cooperative strategies in the future (see appended article 9-10). This familiarity based concept is assumed to be important for the process of developing the contents in relationships. A fifth conclusion is firms that have carefully considered motives of what to achieve in the network will be more likely to know the best kind of future partners – ones that are likely to be good partners and deliver on their promises. The conclusions based on the empirical results suggest that hard and soft motives have different roles in relationship development (see appended articles 9-10). One implication, therefore, is that firms should consider and assess their motives carefully before entering an interorganizational network.

Finally, when purifying the model to meet criteria of validity (i.e., nomological, convergent and discriminant validity) and testing for relationships that were not hypothesized, something important was found (see appended article 10). Motives appear to affect the way relationships expand or develop into committed relationships more so than they affect the specific characteristics of partners. Soft cooperative motives based on learning directly affect interorganizational commitment, whereas hard cooperative motives directly affect reciprocity-based relationships and indirectly affect trust-based relationships. One research implication from validating the results is that a number of variables were eliminated from the original model, thus suggesting a need to devote future attention to further development and refinement of the constructs.

5.3 Partner selection

The third answer to how relationships develop in interorganizational networks refers to the stage of partner selection. This stage encircles the preferences upon which partners are selected and generates a number of conclusions.

One conclusion that can be characterized as a postulate is that partner selection is part of the process that takes place before interaction begins. The assumption is that when firms choose and develop their relationships they also consider different goals. Therefore, firms are assumed to evaluate alternative goals and to ultimately prefer some goals over others. This principle of alternative thinking emerges as they evaluate and target certain types of partners. This thesis therefore proposes that as firms evaluate different alternatives they also recognize there are different consequences to each alternative. The choices are assumed to be

important, since by selecting the most appropriate candidates with which to undertake exchanges, they adjust their expectations and increase information, particularly the knowledge of what to expect, and thus believe they know the level of risk associated with interacting with a particular partner.

The empirical conclusions found in the appended articles of this thesis show that when a firm develops relationships and considers goals they want to achieve, their choices affect how they select partners. Moreover, preferences by firms for future partners also affect how they develop trust, reciprocity, loyalty, cooperation and interorganizational commitment. This is a fundamental part of the thesis and is derived from earlier research such as the integrative framework of Parkhe (1993). The results also are of value for future research because they examine more precisely how the partner selection process can effect the expectations firms develop about potential relationships. In addition, better knowledge of expectations may also decrease the level of risk associated with selecting relationship partners. The findings related to the partner selection literature are reported in several of the articles. The role of partner selection is examined in both the construction (see appended articles 5-6) and tourism industries (see appended articles 7, 9-10).

A logical implication is that firms should examine their current needs in light of earlier experiences so that selected partners more closely match the types that will be effective for a specific purpose.

5.4 Expansion

The fourth answer to how firms develop their relationships in interorganizational networks is associated with the stage of expansion that emerges from interaction. The relationship constructs that are expanded when interaction takes place are friendship, interpersonal commitment, reciprocity and trust.

The findings for this fourth stage of the process are that long term orientations influence friendships, which can ultimately lead to interpersonal commitments (see appended article 4). The first conclusion is thus that expanded relationships develop from long term orientation.

The next aspect of the process is that interpersonal commitments influence cooperation (see appended article 4) but also may effect interorganizational commitment or mediate the effect of trust on interorganizational commitment (see appended article 8). The second conclusion is consistent with earlier theory (Portes, 1998) which says that

trust and reciprocity are simultaneous ingredients in developing lasting relationships. This finding suggests the implication that firms may consider trust and develop trust via interpersonally committed relationships when developing interorganizational commitments.

The next aspect of this stage of the process is that trust leads to interorganizational commitment (see appended article 8, 9), cooperation (appended article 4) and loyalty (see appended article 7). The third conclusion in this stage is also consistent with earlier theory (Gulati, 1995) which says that familiarity breeds trust which leads to further cooperation.

A fourth conclusion of this stage of the process is that reciprocity has a direct effect on interorganizational commitment (see appended article 8, 9 & 10) but is not mediated as expected by interpersonal commitment. However, reciprocity is related to trust (see appended article 10).

A fifth conclusion is that when interorganizational relationships develop from the perspective of trust this need is based on interactions associated with longer rather than shorter term objectives (see appended article 2).

A sixth conclusion is that when interorganizational relationships develop from the perspective of reciprocity (see appended article 4) and when cooperation is difficult, then there also is a very low level of cooperation and a lack of understanding of the dependencies among tourism firms as well as the benefits of reciprocity. When considering such dependencies one conclusion is that expanded relationships between organizations have an important role. Basically, expanded relationships increase the knowledge and thus the level of what to expect. Expanded relationships reinforce (i.e., mediate) committed relationships, which truly reflect how relationships are based on dependencies by “locking” more resources and operations to future relationships.

5.5 Stability and maturity

A final answer to how interorganizational relationships develop refers to the final stage, which is stability and maturity. This final stage is represented by the dependent variables in the tested models.

The first conclusion that can be characterized as a postulate is that relationships are tied to promises and the likelihood of future accomplishments leading to interorganizational commitments, shared decisions and goals involving cooperation, and/or to protecting the relationship through loyalty orientations.

Empirically, one can conclude from this stage of developing relationships that trust has a different role if a firm intends to develop interorganizational commitment or cooperation and loyalty. Trust supports cooperation and loyalty directly but when developing interorganizational commitment, the value of trust is stronger if it is used in combination with interpersonal commitment (see appended article 8). Note that conclusions are also more extensive in some articles than in others. Because this is an evolving process some articles also generated more specific answers than others about how the ultimate stages of relationships can develop. For example, there is one proposed model of cooperation in the tourism industry (see appended article 4) but two sequential models for cooperation in the construction industry (see appended articles 5-6). Similarly, in one article there is a single model of loyalty in the tourism industry (see appended article 7) but in other articles there are three models of interorganizational commitment in the tourism industry (see appended articles 8-10). Appended articles 4-6 developed several models that focused on cooperative strategies. The tourism model of cooperation demonstrated that cooperative relationships can develop both directly and indirectly as a result of long term orientation, friendship, loyalty, trust and interpersonal commitment (see appended article 4). But in the cooperative model in the construction industry two models were tested in the articles to examine how relationships develop. The first cooperative model (see appended article 5) takes into account four different stages of how relationships develop. The stages were later refined into three so that nomological, convergent and discriminant validity conditions could be met. The revised model demonstrates how task-related partner selections significantly mediate pre-stages as an input to how cooperative relationships develop.

The next conclusion about how relationships develop is related to the concept of interorganizational commitment (see appended articles 8-10). Appended article 8 demonstrates that interpersonal commitment mediates trust but not reciprocity. One implication of this study is therefore that when tourism firms develop their interorganizational relationships the value of trust is stronger if they also work to build interpersonal commitments. Article 9 also reports on relationships involving interorganizational commitment. The article is a path analysis that demonstrates the effect of soft and hard cooperative motives on partner selection (that is partner selection based on trust, awareness and cultural affinity), which furthermore have an effect on reciprocity, trust and ultimately interorganizational commitment. This model was specified early in the thesis process and also has a logical justification regarding how the relationships develop. The model in article 9 had acceptable reliability but the validity results were marginal. Therefore, in article 10 this commitment model was developed so the criteria of nomological, convergent and discriminant validity could be met. The conclusion of these latter models is

that hard motives influence reciprocity and directly effect interorganizational commitment, but have an indirect effect on trust. Soft cooperative motives on the other hand have direct effect on trust and interorganizational commitment. Thus, a basic conclusion of this study is that when firms develop interorganizational commitment they should also consider the different roles played by hard cooperative motives (i.e., those related to achieving more efficient cost and financial structures) and soft cooperative motives (i.e., those more closely associated with learning). Since interorganizational commitment strongly considers the role of intentions and promises for their future development, the conclusions could also be important for understanding dependencies between firms. This means that firms wanting to develop interorganizational relationships may also consider consciously developing dependencies, because these are important influences on how well relationships perform.

The thesis also presented a sequential model of loyalty and trust (see appended article 7). This model explains from 30 to 39 percent of variance in the models representing trust and loyalty. The models also show that task-related partner selection has an effect on trust and loyalty. From the findings of the sequential models, it can be concluded that the way loyalty develops from partner selection and trust may provide insights into how loyalty also serves to protect a relationship.

6. Discussion

The objective of the thesis was to examine how relationships in interorganizational networks develop. The approach was to look into different contents of these relationships as well as the pre-stages that precede such relationships. Still, there are always limitations in research as is true in this thesis. More research is needed in this area using longitudinal approaches, as well as studies including other constructs, contexts and larger samples.

However, hopefully this thesis can also stimulate new ideas and approaches. That is one reason for using the diamond metaphor – to stimulate thinking. The overall goal is to build knowledge in the field of interorganizational networks and especially within membership-based interorganizational networks. But to reach this overall goal, the task was extended to include several sub-objectives that are represented by a metaphorically-based diamond.

The diamond framework was developed from Parkhe (1993) and Wetzels, de Ruyter & van Birgelen (1998). The ideas the diamond illustrates are now ready to be extended in new directions in future research. Each facet of the diamond is organized to represent a specific role with specific contents, as well as the procedures that precede the process of finding a diamond.

To tie the articles and individual results together so they merge in a way that communicates effectively and stimulates new research, the characteristics of a physical diamond are summarized. A diamond is expensive and a symbol for value in a ring. This relationship diamond is therefore placed on a ring that symbolizes strong relationships. Engraved in the ring (see Figure 8) is the assumption that these processes involve a long term orientation.

Further research is suggested, therefore, to explore these pre-stages in a more detailed way since they have a central role in coping with risk and expectations. Every firm must deal with risk. Usually firms do not know enough about partners and therefore they perceive certain degrees of risk. This research proposed that better and more sensitive motives and selection of partners (see bottom of Figure 8) may increase firm's knowledge about new partners and thus make their expectations more realistic, which in turn diminishes their risk.

Interorganizational relationships are especially important since they also work as social governance principles. An example of contents could be

that there is robust trust, friendship or reciprocity that governs the relationship. Governance principles also must be considered since they are outcomes of motives and the partner selection processes (see Figure 8).

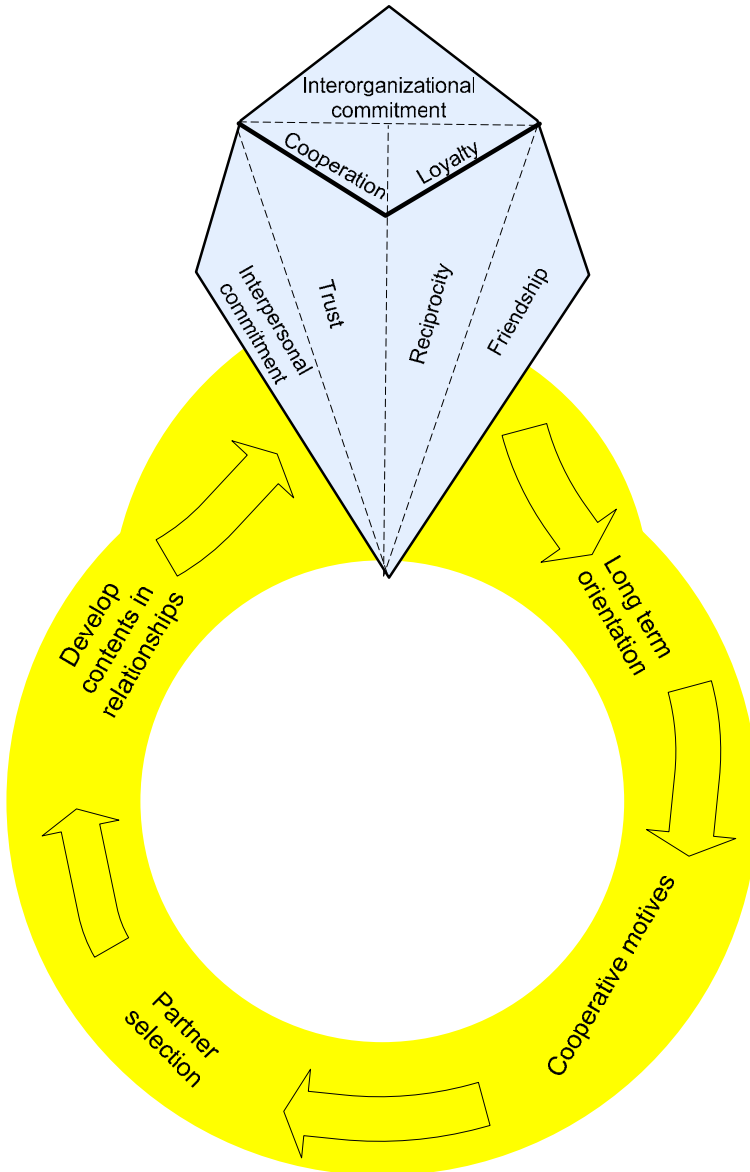


Figure 8: A relationship diamond ring

More research is also needed on the various dependent variables. For example, the current research and contents (i.e., cooperation, interorganizational commitment and loyalty) could be studied from the perspective of stability and maturity. This research has found that firms perceive these as important for their performance and that they are symbols for stability and maturity – which in turn is associated with success in relationships (Parkhe, 1993; Morgan & Hunt, 1994; Mavondo & Rodrigo, 2001). Commitment in particular is considered the ultimate sign of success in relationships (Mavondo & Rodrigo, 2001). It takes time to develop relationships and become successful. This thesis found that cooperation, commitment and loyalty are important components in developing effective relationships.

Finally, the individual articles report the more specific roles exhibited by relationships. Mediation effects are reported as well as the validity of different models. In combination, the articles included in this thesis provide a basis for better understanding relationship development. More research should include more contextual and longitudinal effects. Moreover, using the diamond metaphor should also stimulate thinking and ideas that give new insights to this field.

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7.1 Electronic sources

In Cites October 5th 2007.

http://www.in-cites.com/papers/Morgan_n_Hunt.html

Appendix A –manual for literature study

Author (s):
 Year
 Name of article
 Name of journal:
 Key – words

Review categories

Theoretical view * Transaction cost theory Resource base theory Network theory .. Resource dependence theory Organizational theory Evolution theory Political economy theory Exchange theory Game theory System theory Strategic management theory	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Methodology ** Explorative Descriptive Explanatory Experiment Survey Archival analysis History Case studies Observation (Longitudinal)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
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* If other theoretical view than above, name it:

.....

** Other method than above: (Hypothesis, propositions, comparable, NW/-discourse analysis, benchmarking, cross level, literature, document,)

Unit of analysis *

Relations	<input type="checkbox"/>
Individual	<input type="checkbox"/>
Group	<input type="checkbox"/>
Firm	<input type="checkbox"/>
Network.	<input type="checkbox"/>
Other*	<input type="checkbox"/>

Focus/content of article

1. Accounting/financial issues
2. Advantage/Benefits/Pay-off
3. Antecedent /origin
4. Authority
5. Autonomy/independence
6. Behaviour
7. Boundary
8. Broker /projekt manager / brokerage
9. Capability
10. Centrality
11. Communication
12. Complexity
13. Conflict /Friction/ Tension
14. Context /Environment
15. Contract
16. Control
17. Cooperation /Collaboration
18. Coordination
19. Creation /Formation / Evolution /Egergence /Life cycles
20. Culture
21. Decline /Disbanding / Instability /Dissolution
22. Decision-making
23. Differentiation
24. Disadvantage /costs /Barriers
25. Effectiveness /Performance /Outcome
26. Embeddedness ?
27. Ethics
28. factory /Manufacturing aspects
29. Failure /Decline /Disbanding / Instability /Dissolution
30. Federation
31. Flexibility
32. Flows /Workflows
33. Formalization
34. Function
35. Governance
36. Growth
37. Implementation
38. Inclusivity
39. Information technology /Infrastructure
40. Intensity
41. Interaction
42. Interdependence / dependence
43. Justice
44. Knowledge /competence / Learning
45. Maintance
46. Management aspects
47. Mechanism
48. Motives /Drivers /Reasons /Causes
49. Nature /Form / Structure / Characteristics /Pattern /Configuration /Composition /Types /Design
50. Opportunism
51. Policy exercise /Mental models
52. Power
53. Perequistes /Preconditions /Conditions
54. Price
55. Processes
56. Reciprocity
57. Relations /Linkages /Ties
58. Risk /Pitfall
59. Sanctions
60. Selection of partners
61. Standardization
62. Strategic issues
63. Success /survival
64. Trust
65. Uncertainty
66. Unilateral /bilateral
67. Varabilit

Contribution to research

- Theoretical development
- Methodological development
- New empirical results
- New practical results
- Other

Proposals for further research

Other of interest

Appendix B: Survey Östra Norrbotten

Letter

We are two PhD students at Luleå University of Technology. We will study different aspects on tourism. We belong to the research school of Östra Norrbotten, which particularly see to the interest of Haparanda, Kalix, Överkalix and Övertorneå. One objective with this research school is to adjust education and research with the interest of this region. Within the research school you find a group with a certain interest on tourism. In this group there is two senior researchers, namely Professor Bengt Klefsjö, Dr Håkan Ylinenpää. Our ambition is in the long run to contribute to basic business prerequisites for the region of Östra Norrbotten.

Our research has started with this survey which aims at mapping current tourism firms in Östra Norrbotten. The objective is further to give us an idea of the current status and opportunities that is found within the area of cooperation between firms and quality development.

Our choice of firms is based on the information that could be found on the public website in each municipality.

It is very important that you allot some of your time to respond to this survey. If we do not receive your response before the 4th of April 2002 we will call you and ask you to respond to this survey by phone. The results of this survey will be disseminating through Högskoleförbundet Östra Norrbotten and their website (www.hfon.org). No individual responses will be on our public reports, since our analysis are based on all responses. Still, we hope that you are happy to share your name and phone number in case we need to ask you about additional information during our analysis process.

Thanks in advance

If you have any questions please contact us

Ossi Pesämaa, Doktorand
Telefon: 0920 – 49 30 57
E-Post: Ossi.Pesaemaa@ies.luth.se

Anna-Karin Kvist, Doktorand
Telefon: 0920 – 49 29 35
E-Post: Anna-Karin.Kvist@ies.luth.se

Håkan Ylinenpää, Ekonomie doktor
Telefon: 0920 – 49 12 10
E-post: Hakan.Ylinenpaa@ies.luth.se

Bengt Klefsjö, Professor
Telefon: 0920-49 11 23
E-post: Bengt.Klefsjo@ies.luth.se

Instructions

Read the information below before responding to the survey.

When we in the survey use Östra Norrbotten we mean those municipalities that are related to the research school of Östra Norrbotten, that is Haparanda, Kalix, Överkalix and Övertorneå.

When using tourism we mean the definition that refers to people's activities during their travel and stay outside their home environment for more than one night for other purposes than work related. (see also Turismens begreppsnyckel, Turistdelegationen, 1995)

Below is two different examples on the questions that follows and a brief instruction that make your answering process more efficient.

What is the overall opinion in your firm to cooperate with the university?
Very negative _ _ _ X _ Very positive Cannot take a stand _

Please mark with an X on the scale that range from very negative to very positive.

Where do you believe the most of your guests come from? (Please X only one option)

- _ Östra Norrbotten
- X Sweden (Not östra Norrbotten)
- _ Northern Finland

Please mark the question that best respond to your opinion with an X.

The survey also covers question where you have the opportunity to respond to "other" this means you can feel free to offer a more detailed response.

There are also questions that only have a "yes" and "no" option. If you choose "yes", then please also respond to the question that follows. All specific details can be given on the selected area that is given or you can discuss the details at the length of this survey.

When you responded to this survey, please return it in the pre-stamped envelope or fax it to: 0920-49 21 60

Survey about tourism in Östra Norrbotten

1. Name:.....Phone:.....
Name of Business:Number of employees:

2. What competences have had the biggest impact for the competitiveness of your company? (e.g., cooking, guides, language skills, drivers licence).

.....

3. How willing the firm you represent to offer advice to other tourism firms?

Very negative _ _ _ _ _ Very positive Cannot take a stand

4. How willing the firm is to accept external advice?

Very negative _ _ _ _ _ Very positive Cannot take a stand

5. From what area do you perceive that most of your competition come from?

(Please select one option)

Eastern Norrbotten

Norrbotten (Not eastern)

Sweden (not Norrbotten)

Northern Finland

Other Nordic countries (not Sweden or Finland)

Other European countries (not the Nordic countries)

Other countries not European

Do not know

6. Are there collaborating tourism firms that are crucial to the survival of the firm you represent?

Yes, No, Which _____

7. Do you need other tourism firms to collaborate with?

No, Yes, What kind: _____

8. Does the firm you represent currently collaborate with any other tourism firms?

No, Yes, What kind: _____

9. How is the firm you represent perceived by tourists?

Very negative _ _ _ _ _ Very positive Cannot take a stand

10. Have your firm performed any inquiries about how your firm is perceived by its customers?

No, Yes, What kind of inquiries? _____

11. How is the firm you represent perceived by competitors?

Very negative _ _ _ _ _ Very positive Cannot take a stand

12. How do you believe Östra Norrbotten is perceived as a destination by potential tourists?

Very negative _ _ _ _ _ Very positive Cannot take a stand

13. Please assess on average how the biographical data of your customers are distributed. Sum of each column need to be 100 %.

Age (year)	(%)	Type	(%)	Customers from:	(%)
Below 30		Families		Östra Norrbotten + N. Finland	
30-60		Couples with no children		Other parts of Norrbotten	
60+		Businesses		Other Sweden	
		Other:.....		Other Nordic	
				Other Europe	
				Asia	
				Other world	

14. How reliable is the previous assessment?

Unreliable Reliable Do not know

15. Within which group of customer do you believe you have the biggest potential? For instance a certain group of age, certain marital status or certain part of the world.

.....

16. How would you like to collaborate with other actors within this region? Please select one or several options

- Not at all
- Competence development, that is
- Exchange of ideas
- Certain activities, that is
- Shared transports, that is
- Shared marketing
- Shared employees
- Shared facilities
- Other

17. What are the three most important tangible resources you have access to within your the firm you represent? For example, snowmobiles, conference facilities, cottages, snow sledges, etc? Please indicate from 1 to 3 where one is considered most important.

1.....
 2.....
 3.....

18. Do you perceive that there is a resource that you miss, which is also important for how the firm is likely to develop?

No, Yes, What resource.....

19. Please assess how much the hotel is booked during different periods of the year:

Please answer with an X for each period.

Period	Booked					
	Nothing	Low	Medium	Highly	Full	Don't know
Jan-Feb						
March-May						
June-Aug						
Sept-Oct						
Nov-Dec						

20. Are you interested to have a dialogue with the research school of Östra Norrbotten regarding tourism development in this region?

No, Yes,

Thanks for your cooperation

Appendix C: Survey Northern Minnesota

Letter

How to develop successful tourism companies, networks & regions?

This is the question for an ongoing research project at University of Minnesota, Duluth and Luleå University of Technology in Sweden. The research is to identify factors that facilitate (or serve as obstacles for) cooperation in the tourism business sector. In order to gather experiences from different regions, the research project will study different types of cooperation initiatives in Minnesota, Sweden and Finland. The results of the study will be of great interest to both practitioners and academicians, since cooperation, especially in the tourism sector is very rarely studied.

During the spring semester of 2003, I will be working as a visiting PhD student at the University of Minnesota, Duluth. In preparation for my working semester in Minnesota, I have developed a survey (attached) that – with your kind assistance – will provide valuable information for my project. This survey is divided into three main parts. The first part contains general questions about your company you're your network. The second part includes six questions that will help me to better understand the nature and the structure of your tourism network. The third and most extensive section addresses purposes and aims (as perceived by yourself) related to your network and the relationship of your partners. By tourism and tourism industry I mean businesses and organizations serving local, regional, domestic and foreign visitors to the region, where people (or groups of people) may visit the region for different purposes (leisure, business, etc.). By tourism networks I mean formal or informal cooperation with different purposes and aims. Some networks may be oriented toward marketing, others toward developing products and services or toward lobbying decision-makers on different levels of authority.

The results of this study will be used in a research study that aims to identify success factors in tourism networks. The results will be presented to interested parties and then hopefully be accepted by a scholarly journal. I also plan to communicate the results of the study back to all survey respondents.

I thank you on beforehand for helping me approaching my research questions.

Best regards

Ossi Pesämaa
Luleå University of Technology, Sweden
ossi.pesamaa@ies.luth.se

Some general questions about your company:

- 1a) Name of the company
- 1b) What is your relationship to the business? (Circle all appropriate responses.)
Owner, manager, other employee.
- 2a) Are you male or female? (Circle appropriate response.) Male – Female
- 2b) What is your age?(Circle appropriate response.) 0-25; 26-40; 41+

Please answer questions 3, 4 and 5 below only if you feel comfortable about providing this information.

- 3a) On average how many employees do you expect to have in 2003? (Please write number of full and part-time employees.
- 3b) On average how many employees did you have in 2002?(Please write number of full and part-time employees.
- 3c) On average how many employees did you have in 2001? (Please write number of full and part-time employees.)
- 3d) On average how many employees did you have in 2000?
(Please write number of full and part-time employees.)
- 3e) On average how many employees did you have in 1999? (Please write number of full and part-time employees.)
- 3f) On average how many employees did you have in 1998?(Please write number of full and part-time employees.)

- 4a) Expected net sales of the company, 31st of December 2003:
- 4b) Net sales of the company, 31st of December 2002:
- 4c) Net sales of the company, 31st of December 2001:
- 4d) Net sales of the company, 31st of December 2000:
- 4e) Net sales of the company, 31st of December 1999:
- 4f) Net sales of the company, 31st of December 1998:

5 How much of the net sales, as of 31st of December 2001 is derived from the tourism industry? ___%

- 6 Where are most of your customers coming from? (Please estimate the approximate percent for the last season.)
- From the MN Arrowhead
 - Other parts of MN
 - Other parts of USA
 - Canada

Structure of the network: (Developed from Hörte, 2001)

(Please circle the response alternative that best corresponds to your own opinion.)

7. Assume that you want to introduce a new tourism product or service in your company, or enter a new tourism market. Who is the most important person/category of person you would turn to for advice for this kind of major problem, question or challenge?
 - a. Colleague(s) within the network, namely (name/function):
 - b. My wife/husband or other family members
 - c. People within the company/organization I work for or am an owner for.
 - d. Other: _____

8. How often do you normally have contact with this person to discuss the above mentioned questions, problems or/and challenges?
 - a. Once a year or less
 - b. Once a month or less
 - c. Once a week or less
 - d. At least twice a week
 - e. Almost every day

9. Assume that you have problems and challenges related to routines and day-to-day business, e.g., issues related to transport solutions, maintenance or staff recruitment – who would you turn to for advice?
 - a. Colleague(s) within the network, namely (name/function): _____
 - b. My wife/husband or other family members
 - c. People within the company/organization I work for or am an owner for.
 - d. Other: _____

10. How often do you have contact with this person to discuss above special mentioned issues?
 - a. Once a year or less
 - b. Once a month or less
 - c. Once a week or less
 - d. At least twice a week
 - e. Almost every day

11. Who do you turn to discuss problems and challenges that require a high degree of personal reliance and trust, e.g., questions related to your own leadership?
 - a. Colleague(s) within the network, namely (name/function): _____
 - b. My wife/husband or other family members
 - c. People within the company/organization I work for or am an owner for
 - d. Other: _____

12. How often do you have contact on such issues?
 - a. Once a year or less
 - b. Once a month or less
 - c. Once a week or less
 - d. At least twice a week
 - e. Almost every day

Objectives of the network (Developed from Volery, 1995; Wildeman, 1995)

This third part of the survey addresses initial aims and relations within the network. Scale ranges from 1= strongly disagree to 5=Strongly agree

(Please respond to each question or statement by X-ing the response alternative that best agrees with your own, personal understanding.)

- 13 The main purpose of our network is cost reduction
- 14 The main purpose of our network is sharing costs of R & D
- 15 The main purpose of our network is to gain know-how
- 16 The main purpose of our network is to obtain financing
- 17 The main purpose of our network is to develop our region
- 18 The main purpose of our network is to strengthen networks competitiveness
- 19 The main purpose of our network is to strengthen our networks political power against other branches of industry.
- 20 The main purpose of our network is to strengthen our networks power against other tourism regions
- 21 The main purpose of our network is to achieve and together increase the ability to enter new geographical markets.
- 22 The main purpose of our network is to achieve and together increase the ability to enter new product segments.
- 23 The main purpose of our network is to increase flexibility
- 24 The main purpose of our network is to strengthen the employee's competence in our line of business.
- 25 The main purpose of our network is to share employees in our line of business.
- 26 The main purpose of our network is to build an ability to offer a variety of products and services to the market.
- 27 The main purpose of our network is to increase our networks total market share.
- 28 The main purpose of our network is to share information.
- 29 The main purpose of our network is to share risks in specific projects
- 30 The main purpose of our network is to be more familiar with other tourism businesses.
- 31 The main purpose of our network is to have as many companies as possible involved and engaged in tourism development.
- 32 The main purpose of our network is to increase trust among/ between network partners.
- 33 The main purpose of our network is to increase the sales of a certain product
The main purpose of our network is offering a variety of tourism products and services to the market.
- 34 The main purpose of our network is offering a variety of tourism products and services to the market.
- 35 The main purpose of our network is lowering costs and increasing efficiency through making business in a larger scale (selling the same product in larger amount).
- 36 The main purpose of our network is to identify and utilize a variety of competencies.
- 37 The main purpose of our network is to exploit a specific local or regional resource
- 38 The main purpose of our network is to continuously and step by step develop existing products and services.

39 The main purpose of our network is to develop radically new products and services.

40a I believe the network is important to the success of the firm I represent.

40b I believe the success of our network depends on contributions from other members of the network.

41 The success of our network depends on a specific member in the network.

Partner Selection (Developed from Volery, 1995; Wildeman, 1995)

42 When you think about a potential collaboration with another business, how important is each of the following aspects of the potential relationship?

(Please mark (by X-ing) one of the following alternatives for each response alternative, where Scale 1= Unimportant to 5=Very important

- a) I am familiar with the partner
- b) My partner acts as I expect him/her to do
- c) I have good reliance/trust in his/her behavior
- d) H/she shares my values
- e) We have a clear and a shared strategy
- f) We divide the weight of power between us
- g) He/she is willing to follow formal agreements/ contracts
- h) Each one contributes with financial involvement.
- i) We don't act like competitors
- j) We share a cultural background
- k) We share a regional identity
- l) We belong to the same line of business
- m) We share the ambition to make money
- n) We possess the same knowledge and competence
- o) He/she has different knowledge/competence than I do
- p) The new partner shares the same willingness to take on risk I do.
- q) The new partner is independent and able to contribute to the network.

Social Relations (Developed from Mavodo & Rodrigo, 2001)

43. Please assess the importance of social relations with others within the network for your own business performance? Scale 1= Unimportant to 5=Very important

(In the concluding section (questions 43-50), please mark by an X the response alternative that best corresponds to your own business opinion/understanding.)

- a) How important is it that I interact with my network partner(s) on a social basis outside work?
- b) How important is it that my network partner and I agreeable to talk openly as friends?
- c) How important is it that I consider my network partner(s) as being almost as close to me as my family?
- d) How important is it that if I were to change business partner (s), I would lose a good friend in my current partner (s)?
- e) How important is it that I consider whether my network partner's feelings would be hurt before I make an important decision?

44. Please assess the importance of avoiding embarrassing situations with other in the network for your own business performance? Scale 1= Unimportant to 5=Very important

- a) How important is it that I take care not to embarrass my network partner(s) or make him/her feel uncomfortable?
- b) How important is it that I not confront my network partner(s) at a meeting even if he/she was wrong?
- c) How important is it that I always give my network partner(s) an avenue out so that he/she would not be embarrassed?
- d) How important is it that I am likely to resolve conflict in an agreeable way, rather than through the use of power?

45. Please assess the importance of trust in the network for your own business performance? Scale 1= Unimportant to 5=Very important

- a) How important is it that my network partner(s) is honest and truthful with me?
- b) How important is it that I have great confidence in my network partner(s)?
- c) How important is mutual trust has in developing a relationship with my network partner(s)?
- d) How important is it that network partner(s) not try to take advantage of our relationship for his/her company's own sake?
- e) How important is it that I have not been negatively surprised by my network partners actions?
- f) How important is it that I can rely on my network partner(s), because I know he/she shares my values?

46. Please assess the importance of relationship sustainability for your own business performance? Scale 1= Unimportant to 5=Very important

- a) How important is it that establishing the relationship between the network partner(s) not take longer than I expect?
- b) How important is it that I am dedicated to establishing along-term relationship?
- c) How important is a relationship with my network partner(s) even if it is not providing me any immediate benefits?
- d) How important is it to discontinue the relationship with my network partner(s) quickly if there is discord?
- e) If the relationship with my network partner(s) was discontinued, I would be unlikely to try to re-establish it again.

47. Please assess the importance of reciprocity among your network partners for your business performance? Scale 1= Unimportant to 5=Very important

- a) How important is it that I “call in” favors as part of doing business?
- b) How important is the practice of “give and take” of favors in the relationship between my network partner(s)?
- c) How important is it I feel a sense of obligation to my network partner (s) for doing me a favor?
- d) How important is feeling embarrassed if I am unable to provide a requested favor to my network partner?
- e) How important is it to business to return favors?
- f) How important is it that if my network partner(s) was wrong, I would retaliate in kind?

48. Please assess the importance of cooperation among your network partners for your business performance? Scale 1= Unimportant to 5=Very important

- a) How important is that my partner(s) exhibits similar goals to mine?
- b) How important is understanding my network partner(s) temporary difficulties even if it causes a short-term loss to my company?
- c) How important is it that my network partner(s) and I make decisions together?
- d) How important is it that my network partner(s) and I work together towards common goals?
- e) How important is it that I am willing to be flexible in the face of changed circumstances?
- f) How important is communicating with my network partner(s) to overcome barriers to development of our relationship?

49. Please assess the importance of interpersonal commitment among your network partners for your business performance? Scale 1= Unimportant to 5=Very important

- a) How important is it that business I have with my network partner(s) is a purely business transaction?
- b) How important is commencing the relationship with my network partner(s) was to gain immediate benefits for my company?
- c) How important is it to continue the relationship with my network partner(s) even if it is not providing me any immediate benefit?
- d) How important is the fact that relationship I have with my network partner(s) was developed over a long period of time?
- e) How important is it that developing the relationship with my network partner(s) to provide future advantages for my company?
- f) How important is it that I intend to exchange more important information with my network partner(s) than I do now?
- g) How important is it that I intend to allow my network partner(s) more decision-making in the future?
- h) How important is it that I share similar business values with my network partner (s)?
- i) How important is it that I share similar social values with my network partner (s)?

50. Please assess the importance of commitment among your network partners for your own business performance? Scale 1= Unimportant to 5=Very important

a) How important is it that I promise to exchange resources (e.g., cottages, rooms, staff, boats) inside our network?

b) How important is it that all companies contribute equal to the network?

c) How important is it that the companies within the network make the same contribution to the business relationship we have?

d) How important is it that we intend to allocate more resources (e.g., lodging capacity, competent staff, equipment) to our business relationship within the network?

e) How important is it that we are bound to the network for future operations?

f) How important is it that we discontinue any search for alternative companies or alternative networks to deal with?

g) How important is it that reliability of this tourism network has led to a rewarding business relationship?

Appendix D: Appended Articles

Interfirm Network Content Analysis

Ossi Pesämaa

Working Paper 2004: 59

*Text for a thesis version of this Working Paper
was revised in November 2007*

Abstract

This paper explores and describes some directions within the field of interfirm networks. The directions are the result of examining 210 different research papers. The research papers are based on a collection from 1961 until July 2002 from a number of databases. Furthermore the papers were categorized into different categories. The categories used in this paper are as follows: author; year; name of journal; theoretical base; methods used; unit of analysis in the paper; focus of content; contribution and their proposition for further research. Further the categories are quantified in a number of figures and tables. The paper also includes an appendix which consists twelve columns where the categories for each paper are reported in combination with a quotation in order to enable some kind of validation process for the reader. The findings are mostly descriptive but will reveal some interesting data about common research techniques and approaches used. The main contribution is to reveal and offer a platform for upcoming research within the area of network related research.

1 Introduction

When two or more firms share ideas, knowledge, risks, governance, strategy, logotype, reputation, information, familiarity, or any other purpose we define the concept as interfirm network. Such networks can be formal or informal and appear in horizontal or vertical settings. Interfirm networks are important because they push the speed of globalization; complement firms resource domains, increase competition between networks of firms and link the firm to external contacts. Interfirm networks are therefore a dominating field to understand both global movements; growth of firms; and strives to transmission policies to facilitate survival and prosperity in specific regions. Studies of interfirm networks are undertaken by different academic traditions such as organizational, economic and sociological questioning the legal, strategically, organizational and administrative boundaries of the firm. Although, few attempts are completed to outline concepts, approach, method, theory and unit of analysis used as scope of evidence to understand the trajectories and contents in the field of interfirm networks.

This paper represents a quantifying literature study. Quantified literature reviews in business related studies are traditionally used to capture a given circumstance under which the business operates. Elango and Fried (1997) summarized 99 articles within franchising into three main streams. Huse (2000) selected specific articles from eight leading management journals and found 91 articles that especially took a close look at boards of directors during the years 1952 – 2000. Dodgson (1993) explored papers that related to organizational learning. Dangayach and Deshmukh (2001) categorized 260 articles from 31 different journals in the field of manufacturing strategy. Ratnatunga and Romano (1997) explored 725 articles and the roughly 16 720 citations used in these articles studying small enterprises, and narrowed the sample using subjective criteria from used topics, method and objectives of study in order to facilitate a tailored classification. Interfirm networks has so far not taken

advantage from this kind of quantified studies, nor is very few attempts in general made to find guidelines how to work and categorize extensive material.

Nohria and Eccles (1992) suggest several guidelines and implicit assumptions for studies within the field of interfirm networks. Nohria and Eccles (1992) request an organization of the network concept. The conceptual confusion argued by Nohria and Eccles (1992) this paper contain following research question: What constitute interfirm networks? The objective of this paper is to explore and describe current direction of interfirm networks.

2. Method

Interpretive reading entails systematic documenting of what each domain of data (article or document) represents (Mason, 1996). Systematical categorizing process (content analysis) facilitate knowledge about clusters of meanings that infers with the given subject and concept. Stringent content analysis can offer knowledge about rules and norms for a given concept.

The overall aim of this study is to reveal directions for studying interfirm networks. These directions are made with content analysis. According to Ahl (2002) content analysis is restricted to quantification of words. Content analysis can provide directions which are the base to develop an understanding of the direction. The paper is focused to categorize 210 different studies or articles. Categorizing the different papers and studies served as a mode to differentiate the selected studies from one another (see appendix). The categories also represent domain for the potential future directions.

Using different categories to approach a concept can help to reveal what is taken for granted in different disciplines (Mason, 1996; Kumlien and Axelsson, 1999; Hertzberg, Ekman, Axelsson, 2001). Using written truth as a base for analysis has also become common in research, not just as a descriptive secondary data analysis, but also as a base for understanding concept development (Bergström and Boreus, 2000; Ahl, 2002).

2.1 Selection of papers

In order to collect a representative number of papers we first performed a search in different databases available at Luleå University of Technology. Databases used are Academic Search Premier; Business Source Premier, Econlit, ASIA, SCANP, SCIMA, HELICON and LIBRIS. In a first attempt 35 868 articles responded to the keyword "Network(s). The concept of network includes a magnitude of issues and academic disciplines, such as engineering and issues and related to technical oriented networks and different system. In order reduce the number of papers to a manageable amount and at the same time ensure coverage we narrowed the keywords (i.e. Virtual organizations; Interfirm networks; Network organizations; Virtual corporations; Virtual enterprises; Imaginary organizations; Inter-firm networks; and Industrial networks). Further a more senior colleague, Joakim Wallenklint, sorted out articles on subjective basis, in order to clean up from papers that possibly still remain outside the focused term interfirm networks. This study have limitations because of the given library access at Luleå University of Technology.

3. Results

Following section report results from the different categories. Each category will be viewed as an issue from a theoretical perspective and be presented as a table. The appendix of this paper report details of the selected papers. One issues though is that some researchers' miss to clearly state what method, unit of analysis, theory, etcetera they use in the paper. This has made the assessment difficult and thus also subjective. I have, on basis of my understanding, used senior advice, information from both used references and implicit writing in the paper made an assessment. The categories are as follows: year; type of journal; theoretical base; approach; method used; unit of analysis; focus of content; and contribution to research. The

final appendix also include: papers enumerated by author and journal; view contribution to research in an extended form; highlight a number of proposal for further research; and also a quotation which serve as a validation base for readers.

3.1 Year

Nohria and Eccles (1992) argue interfirm networks has late received recognition as an academic discipline and thus resulted in an increased attention in published articles. Also this study claim that more focus is today on interfirm networks (see Table 1).

Table 1:
Articles studying interfirm networks

Year	Frequency
1961-1965	2
1966-1970	1
1971-1975	1
1976-1980	9
1981-1985	14
1986-1990	13
1991-1995	45
1996-2000	91
2001-	27

Table 1 point out number of published paper every five years. According to my sample there is an increased number of published papers (see table 1). The collection of papers in this is study is limited to June 2001, hence there is no scope of evidence to discuss trends beyond that date.

3.2 Theory in selected papers

One purpose with this study was to learn more about theory building and theories related to the network approach. Since a PhD-process also contains an individual education this part was essential for my understanding of the area. Understanding networks can obviously be understood from a magnitude of different perspectives, which is shown in the upcoming table about different theoretical domains. This part of the study is also one of the most challenging, since it in many cases were very difficult to estimate what theoretical base the individual researcher based his or her conclusions on. A lack of deduction to current theories forced me to either classify some of the paper as either unclear in terms of theoretical base or make a subjective assessment.

Table 2:
Theoretical Base

Theory (x) Used	Total Number (x) Theories
Transaction Cost Theory	25
Resource Based/ Dependence Theory	16
Network Theory	126
Organizational Theory	18
Evolution Theory	21
Political Economy Theory	7
Exchange theory	11
Game theory	4
System theory	3
Theories Related to Strategic management	30
Agency Theory	1
Communication Theory	4
Institutional Theory	2
Grounded Theory	2
Small Group Theory	1
Self-efficacy Theory	1
Social Theory	2
Labor Process Theory	1
Panopticom Theory	1

The most common theory was network theory, theories that relate to strategic management, evolutionary theory, exchange theory, transaction cost theory and resource based theory which also emerges often in combination with one another or in combination with some other theory.

Table 2 also reveals that there is lots of other theories that related to the network literature. Many of these seems also interrelated to one another. For instance resource dependency with resource based perspective/theory. Also panopticom theory and agency theory was also found to be related to the literature of networks. Moreover the concept strategic management itself includes a magnitude of theoretical approaches, which explains strategic behavior.

The use of theory seems still as a divisive part in networking theory. Lots of studies represent empirical evidence that exemplify a success or a failure by using theories related to interfirm networks. The lack of good theoretical explanations might depend on complexity of the interfirm networking phenomenon. Theories related to interfirm networks seem to rely on a set of different theoretical approaches. Lots of theoretical evidence signifies interfirm networks as parts to understand for instance governance, information systems, resource allocation or mechanisms that shift our attitudes. Different scholars use the concept of interfirm network to understand partial phenomenon of social, organizational or technical science by merging the narrow supporting theory to the overall holistic theory. Therefore we also find more theories in this field such as institutional theory, small group theory. Few examples of institutional theory point out that there is a growing need for more exhaustive understanding of the behavioral mechanisms. Many of the articles in this study where related

to a mix of theories in strategic management, which could in itself indicate the grand need to explain where success and failure emerge. However strategic management has not succeeded to find any general theory. Maybe strategic management would benefit from focusing on the behavioral aspects, and in light of success and failure. Agency theory (table 2) is also to a less extent used, but governance issues, as in agency theory are many times covered in light of transaction cost theory. One implication is also that a mixed combination of two or more theories may help the researcher to understand the phenomenon of interfirm networks.

3.3 Methods used

Research on interfirm networks calls for several disciplines and multiple methods. Lots of research analyzed in this paper represents a triangulating tradition (Yin, 1994), where multiple sources of evidence are used to build knowledge. But, the fact that interfirm networks many times concern human relations limit the use of certain methods, for instance human experiments will involve too many ethical dilemmas and constraints in terms of participations willingness. One challenge is thus to find other methods that can substitute ethically sensitive experiments. For instance can game theoretical scenarios be one such beneficial method, which do not necessitate persons of flesh and blood.

*Table 3:
Method used*

Experiment	2
Survey	85
Literature studies	57
Case studies	93
Observation	6
Longitudinal	10
Briefcase	32
Simulation method	2

The methods results several categories are presented in Table 3. Survey category includes those that explicitly describing a quantitative number of actors, businesses, cases or transactions. Survey category also contains those testing hypothesis and propositions by a generalized number of units. Literature studies capture complementary archival or document analysis, historical evidence, content analysis and traditional literature studies. Case studies include comparative examples of networks in different countries, as well as traditional examples of exemplifying for instance a success story. Briefcase as a way of assessing evidence rely on Alexander (1997) who introduce these as a way to collect portfolios of commentaries, opinions and research experiences into one paper. Briefcases have in this paper facilitated difficult assessments, where the method has not been clearly declared. Simulations apply to game-theory scenarios or test different logistical tests of utilizing integrated supply networks.

The results implicate that few studies undertake longitudinal approaches or studies on plain observational basis. The lack of longitudinal studies might be an explanation of the interfirm network concept as a relatively new mode of organization.

3.4 Unit of analysis

Unit of analysis is central to build knowledge of interfirm networks. Typically interfirm network contains multiple units of analysis (i.e. resources, routines, behavioral cognitions, relations,

business entity, subgroups, individuals, transactions, holistic systems, and geographical areas). The selection of appropriate unit of analysis is closely tied to the theoretical perspective.

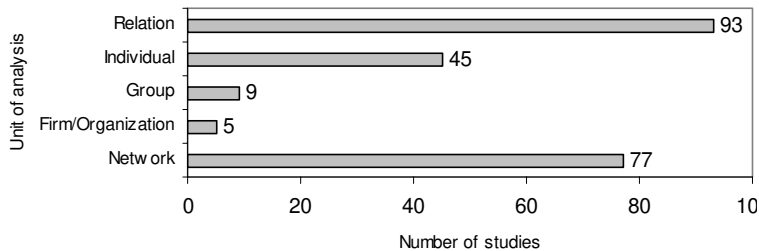


Diagram 2: Unit of Analysis

Provan and Brinton (1995) argue that the traditional approach of dyad relations had shifted to be more focused on the system as whole. But, unit of analysis shifts among different perspectives and the reader needs to be attentive to the used unit of analysis. In order to understand systems the researcher often operationalized the unit of analysis to include a multiple unit of analysis (Yin, 1994; Miles and Huberman, 1994). Consequently this means the firm and its transactions should be considered as the main focus of analysis (Williamsson, 1981). Williamsson (1981) uses the term efficient boundaries to reflect upon the units that really involve a firm performance. Williamsson (1981) also state that the firm should include interest of how human assets are organized. This focus of organizing may be due to the fact transaction cost economies (Coase (1937; Williamsson, 1981) focuses a lot on optimizing governance by altering a governance structure within a firm to external sources such as market. Other type of literature criticizes the transaction cost theory. Nelson and Winter (1982) argue that classical models in transaction cost do not capture empirical issues, but only those found in the models. Classical models will only yield explanation power to micro economic models and totally reject the issues behind undertaken assumptions. As a consequence to these statements Nelson and Winter (1982) rather prefer weight models of relative importance to a certain model. Since the evolution and survival of firms are in interest of this theory the evolutionists strive to understand purposes and selection among the variety that is offered. The evolutionary perspectives rather concern about routines as main unit of analysis in order to understand the performance within the interfirm network. The criticism against transaction cost theory is also raised by structural theorists. Granovetter (1985) heeds for the embeddedness in the system and argues that the rational assumptions made by transaction cost theories will fail, since concepts such as trust will unsettle this kind of assumptions. By that Granovetter (1985) explicitly states that a lawyer or other law people make sure the agreed will are followed in the contract, but “only” until counterparts in the contract disagree. The concepts of sociological nature will rather then focus on the system and understand ties between different nodes. A systems perspective is therefore demanded to understand this kind issues. According to the results of this study, it is obvious that multiple unit of analysis is used.

3.5 Focus of content

Next, a number of keywords are listed in Table 4. These keywords are platform to assess focus (-s) in the studied papers. Table 4 show that traditional focus on firm would emphasize the importance authority (formalization and centrality) by control, and act opportunistically with high internal efficiency (flows and workflows). These words could all symbolize the

focus on the firm. Another interesting thing is that many papers focuses on boundary spanning, trust as control mechanism to, interdependent relation to increase flexibility.

*Table 4:
Focus of content in articles*

Focus of content	Number of studies
Antecedent /origin	3
Authority	1
Autonomy/independence	5
Behavior	1
Boundary	7
Broker /project manager / brokerage	6
Capability	1
Centrality	2
Communication	7
Conflict /Friction/ Tension	3
Context /Environment	16
Control	1
Cooperation /Collaboration	6
Coordination	3
Creation /Formation / Evolution /Emergence /Life cycles	5
Culture	6
Decline /Disbanding / Instability /Dissolution	1
Decision-making	3
Effectiveness /Performance /Outcome	3
Embeddedness	1
Ethics	1
Factory /Manufacturing aspects	1
Flexibility	1
Flows /Workflows	14
Formalization	3
Governance	5
Growth	7
Information technology /Infrastructure	7
Interdependence / dependence	3
Knowledge /competence / Learning	14
Management aspects	2
Mechanism	1
Motives /Drivers /Reasons /Causes	3
Nature /Form / Structure / Characteristics /Pattern /Configuration /Composition /Types /Design	54
Opportunism	4
Power	3
Prerequisites /Preconditions /Conditions	2
Relations /Linkages /Ties	40
Risk /Pitfall	2
Selection of partners	11
Strategic issues	28
Success /survival	4
Trust	17
Uncertainty	2
Complimentary	1
Change	2

Table 4 also prove that few studies focus on motives/ drivers/ reasons/ causes and still few have looked deeper into mechanisms and flexibility. Success and survival is also to a less extent represented in this evaluation. Another important area of study should be tailored to prerequisites and grounds for establishing any kind of collaboration.

Table 4 show that there is a fair number of studies related to strategic issues in general. The dominating focuses seem to concentrate on the concept of interfirm network in describing and conceptualizing the nature/ form, structure, characteristics, pattern/ configuration, composition/ types and design as well as the category capturing different nuances of relations/ linkages and ties. We also seem to have according to Table 4 a relatively good picture of the milieu surrounding the interfirm network in the category context/ environment. Trust as a recurrent explanation is also well represented in this study. Bottom-line levels of trust may somewhat symbolize the reason or prerequisite in every collaborative incentive.

3.5 Research contribution

Next category was to assess the contribution of each paper. Most of the journals have the interest of a theoretical development.

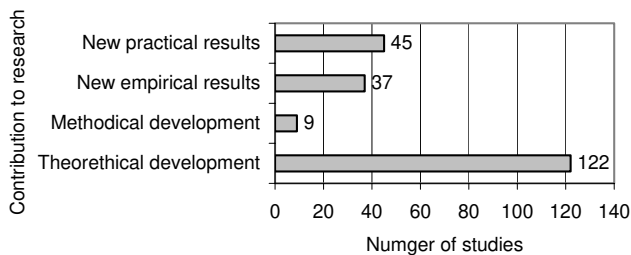


Diagram 3: Contribution to research

Diagram 3 show that more than half of the paper represents a theoretical development. Numerous papers contribute mainly with practical implications or new empirical results. As many journals in the management field especially ask for practical implications, much of the contributions also focus on such outcomes. Methodical development is sparsely represented in the papers. The tiny interest to develop applicable methods may describe the fact that few journals see themselves as forums for methodical development.

5. Conclusions

This report claim and verify that the interest of networks is increasing in terms of papers published. Interfirm networks as a new concept facilitate an understanding of the “new economy”. Interfirm networks as basic unit of analysis may help to understand “how and why” firms grow and in which situations they go beyond its natural administrative boundaries. More depth studies using individual cases with multiple methods and unit of analysis may also enhance understanding of mechanisms constituting success. More in depth studies may help to initiate policies for successful collective management.

The main objective of this paper was to outline some directions within the field of interfirm networks. It is obvious that the interfirm network approach does not just allow, but stress the use of multiple theories, methods, approaches and unit of analysis.

The second objective of this paper was to develop an instrument and technique to receive an accumulated content within the field of organizational studies. The instrument has worked in a proper way, even though each category is broad and thus requires detailed notes. However the evaluation technique has been under a cumulative development throughout the process.

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Appendix

The appendix that follows includes all 210 articles. The table view how each article is assessed. The appendix works as a platform to evaluate how reliable each of the different categories aggregated on the previous section are. The table thus justifies my results, since the differences in all the papers offer a variety of different opportunities. The procedure of interpret the individual papers took more than a year and in an early stage of my PhD. The long time and the fact that this is a pioneering form of accumulating literature may have affected the results.

Author (s)	Year	Name of article	Name of journal	Theoretical view	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Quotation
Achrol, R.S	1997	Changes in the theory of inter-organizational relations: toward a network paradigm	Journal of the Academy of Marketing Science	Network theory, Game theory	Brief-case	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	This paper is conceptual framework which increase the understanding of communication processes in both dyadic and network perspective	"... focuses on identifying the different forms of network organization..." p 58
Ahuja, G (1)	2000	Collaboration networks, structural holes and innovation: A longitudinal study	Administrative Science Quarterly	Network theory	Survey, Longitudinal, Hypothesis	Relation	Broker/ project manager/ brokerage, Embeddedness	Theoretical development	Describes different types of business networks and has also a focus on conceptual framework.	"...explicitly recognize the duality of the linkage-formation process and builds on both the strategic needs and social structural perspectives." p318
Ahuja, M.K	1999	Network structure in virtual organizations	Organizational Science	Network theory	Survey, Network analysis	Network	Context, environment	Theoretical development	Is the fit between task and structure affecting the network performance.	"It empirically examines the structure of a virtual organization and provides a foundation for theory building regarding this increasingly popular type of environment." p 754
Aiken, M & Hage, J	1968	Organizational interdependence and intra-organizational structure	American Sociological Review	Organizational theory, Exchange theory	Survey, Hypothesis	Relation	Relations/ linkages/ ties	New empirical results	Decision making and communication in networks	"...involving interdependencies in more critical areas, and involve organizations having more similar goals." p 928-929
Alajoutsijärvi, K & Tikkanen, H	1998	Competence development within industrial networks: Analyzing a case	Journal of International Marketing	Resource dependence/ Resource based theory	Case studies, Longitudinal	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Industrial networks and clusters, competence	"... purpose of this paper is to introduce a conceptual framework and a case example..." p 139
Aldrich, D	1998	The new value chain	Information Week	Network theory	Brief-case	Network	Flows/ Workflows	Theoretical development	Opinions on networks	"...traditional retailers disseminating product information...Web's more efficient information sharing and transactional capabilities." 278

Author (s)	Year	Name of article	Name of journal	Theoretical view	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
Alexander, M	1997	Getting to grips with the virtual organization	Long Range planning	Network theory	Literature review/ essay	Network	Boundary	New practical results	Determinants of organizational boundaries		"Briefcase is a portfolio of commentary, opinion, research experience." p. 122
Alter, C	1990	An exploratory study of conflict and coordination in interorganizational service delivery systems	Academy of Management journal	Evolution theory	Survey, Case studies	Relation	Conflict/ friction/ tension	Theoretical development	Model conflicts		"Constructing explanatory or predictive models of interorganizational behavior using data from cross-sectional exploratory studies..." p 497
Andersson, J.C & Hakansson, H	1994	Dyadic business relationships within a business network concept	Journal of Marketing	Network theory	Case studies, Observations, Network analysis	Firm/ organization	Relations/ linkages/ ties	New empirical results	Discussing dyadic business relations	Research on business relationships within business networks	"...description of a company's environment." p 1
Aoyama, Y	1999	Policy interventions for industrial network formation: Contrasting historical underpinnings of small business policy in Japan and USA	Small Business Economics	Evolution theory, Political economy theory	Case studies	Firm/ organization, Network	Cooperation/ Collaboration, growth	Theoretical development, New empirical results	This paper undertakes the importance of small businesses growth. What are critical conditions for sustainable development of interfirm networks?		"Policies have in part played a role in the development of prosperous small business economy." p 227
Arndt, J	1985	The anthropology of interorganizational networks in marketing	Scandinavian journal of management studies	Resource dependence/ Resource based theory, Network theory, Evolution theory	Observations, Longitudinal	Network	Creation/ Formation/ Evolution/ Emergence/ life cycles, Culture, Decline/ Disbanding/ Instability/ Dissolution	Theoretical development	Examine the role of cultures		"The metaphors derived from the corporate culture tradition suggest research strategies different from the currently popular single-shot, cross-sectional surveys of network members." p 176

Author (s)	Year	Name of article	Name of journal	Theoretical view	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Quotation
Atkins, M & Dawson, P	2001	The virtual organization: Emerging forms of ACT-based work arrangements	Journal of General Management	Network theory	Briefcase	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	New practical results	Using new informational technique in innovation and work processes	"As a string point, the model we have described provides a framework for understanding ..." p 50
Baker, W.E	1990	Market networks and corporate behavior	American Journal of Sociology	Organizational theory	Comparable (case) analysis	Relation	Power, Relations/ linkages/ ties, Strategic issues	Theoretical development	Argue that market relations are socially structured. Moreover Baker argues corporations manipulate the market intensity.	"Though each firm's strategy must take into account corporate objectives and needs, organizational resources, and the characteristics of specific products and transactions..." p 41
Baker, W.E & Faulkner, R.R	1991	Strategies for managing suppliers of professional services	California Management Review	Strategic Management theory	Briefcase	Firm/ organization	Strategic issues	New practical results	Strategies for supplier management	"...successful corporate managers avoid sole-source and use a variety of multiple-source strategies to maximize the value of professional services. But managers of service suppliers lack a practical management framework..." p 44
Barnatt, C (1)	1995	Office space, Cyberspace and virtual organization	Journal of General Management	Resource dependence/ Resource based theory	Comparable (case) analysis	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	New practical results	Impact of development in computer and communication technology on organizational structures new communication technique impact on virtual organizations	As resource to both theory and current practice, this paper draws together common themes concerning virtual organizations by exploring the impact of development in computer and communications technologies upon working practices and organizational structures. p78
Barnatt, C (2)	1997	Virtual organizations in the small business sector: The case of Cavendish management resources	International Small Business Journal	Resource dependence/ Resource based theory	Case studies	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	New practical results	This paper discuss virtual organizations based on lean management surrounded of a central broker	"Key to this conclusion is an analysis of CRM's policy of charging members a monthly fee in order to permit them to remain part of its virtual organizational collectives." p 45

Author (s)	Year	Name of article	Name of journal	Theoretical view	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
Beaumont, J.R	1992	Managing the environment: Business opportunity and responsibility	Futures	Strategic Management theory	Briefcase	Firm/ organization	Context, environment, Strategic issues	New practical results	Discuss when and where to use a proactive strategy rather than reactive		"It is argued here that business has both a responsibility and an opportunity to assist in environmental management and business actions should become proactive, rather than reactive in this respect." P187
Belussi, F	1996	Local systems, Industrial districts and industrial networks: Towards a new evolutionary paradigm of industrial economics	European Planning Studies	Evolution theory	Literature review/ essay	Network	Capability, Creation/ Formation/ Evolution/ Emergence/ life cycles, Culture	Theoretical development	The paper discuss and conceptualize several concepts such as growth, competence, strategy, resources and capacity		"...Describe the laws and motion of local systems..."p 6 "
Belussi, F & Arangel	1998	A typology of networks: Flexible and evolutionary firms	Research Policy	Transaction cost theory, Network theory, Evolution theory	Comparable (case) analysis	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Evolution of network - a proposed process		"Some specific characteristics appear to be particularly important: (a) the ability of emerging firms to control network-related sunk costs and to benefit from externalities and other technological opportunities created within networks, and (b) the ability to transfer capabilities throughout their internal and external network system." p 426
Benassi, M	1995	Governance factors: a network process approach	Scandinavian Journal of Management	Network theory	Literature review/ essay	Network	Governance	New empirical results	Theory, typology and what role of government	Comparisons of strong and weak characteristics in different network typologies	"... understanding of the behavior of firms." p. 270

Author (s)	Year	Name of article	Name of journal	Theoretical view	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
Benson, K	1975	The interorganizational network as a political economy	Administrative science quarterly	Network theory, Political economy theory	Literature review/ essay	Network	Context, environment, Strategic issues	Theoretical development	Managing businesses to fit into given contextual settings. The paper also contains well developed theoretical framework, grounded theory and discussion of explanatory principles in network theory.		"... network is a fundamental unit of analysis in the study of advanced industrial societies." p229
Biggiero, L.	2001	Self-organizing processes in building entrepreneurial: A theoretical and empirical investigation	Human Systems Management	Network theory, Organizational theory	Case studies	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Empirical and theoretical focus on self organizing procedures.		"... contribution to the theory of entrepreneurship and to the analysis of inter-organizational networks." p 209
Boje, D.M & Whetton, D.A	1981	Effects of organizational strategies and contextual constraints on centrality and attributions of influence in inter-organizational networks	Administrative science quarterly	Exchange theory	Survey	Firm/ organization	Centrality	Theoretical development	Testing model, tailored in power, with network analysis.		"Finally, the past emphasis on dyadic analysis of interorganizational relations clearly has limitations." p 392
Bonomo, T.V	1982	Major sales: Who really does the buying	Harvard business review	Strategic Management theory	History review	Individual	Strategic issues	Theoretical development	Explanation of buying behavior		"Buying centers and individual managers usually display one dominant power base in purchasing decisions." p 115
Bovasso, G	1992	A structural analysis of the formation of a network organization	Group and organization management	Network theory	Survey/ Network analysis	Relation, Network	Broker/ project manager/ brokerage, Centrality, Strategic issues	Methodical development	This paper proposes group influence, especially in terms of resource control and management involvement.	Emphasize that network analysis is an important tool in structural and process approaches.	"Prominence in the societal influence network is measured on an asymmetric basis...general involvement in the network." p 90

Author (s)	Year	Name of article	Name of journal	Theoretical view	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Quotation
Brito, C.M	2001	Towards an industrial theory of the dynamics of industrial networks	Journal of Business and Industrial Marketing	Network theory	Observations	Relation	Relations/ linkages/ ties	Theoretical development	Forms of exchange	"Firms are not independent entities acting on their own in the market." p 151
Bruce, M., Leverick, F., Litter, D. & Wilson, D	1995	Success factors for collaborative product development: A study suppliers of information and communication technology	R & D Management	Network theory	Survey, Literature review/ essay	Relation	Motives/ drivers/ reasons/ causes	Theoretical development	How to measure collaboration success	"A tension exists between collaborating and being competitive." p43
Bull, C.A., Pitt, M. & Szarka, J	1991	Small firms and industrial districts	Entrepreneurship	Network theory	Survey, Comparable (case) analysis	Network	growth, Knowledge/ competence/ learning	Theoretical development	Innovations, Industrial districts and Growth	"...local firms pursue individualistic strategies and do not value co-ordination, equating self-sufficiency with success." p 96-97
Buono, A.F	1990	Managing Joint Ventures: inter-firm tensions and pitfalls	Sam Advanced Management Journal	Network theory, Strategic Management theory	Longitudinal	Network	Control, growth, Strategic issues	New practical results	Opportunities, challenges and problems with joint ventures	"...based on a longitudinal study of a domestic JV between two computer services firms..." p28
Burn, J. & Barnett, M	1999	Communicating	IEEE Transactions on Professional Communication	Network theory, Political economy theory	Literature review/ essay	Network	Boundary, Culture, Formalization, Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	New empirical results	Explains in a satisfying way how virtual organizations emerge as a result of cultural forms.	"...the ability to establish multiple alliances and the need to retain a particular identity creates a constant tension between autonomy and interdependence, competition and cooperation." p216
Burn, J.M & Cowan, E	1999	Knowledge management: Strategies for virtual organizations	Information Resources Management Journal	Network theory	Literature review/ essay	Relation, Individual, Group, Firm/ organization, Network	Creation/ Formation/ Evolution/ Emergence/ life cycles, Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design, Strategic issues	Theoretical development	This paper discuss forms, new structures and impact on organizational change	"Without the ability to identify who has the key information, who the experts are, and, who needs to be consulted, management decisions are unlikely to be optimal. p 22

Author (s)	Year	Name of article	Name of journal	Theoretical view	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
Burt, R.S., Christman, K.P., Kilburn, H.C	1980	Testing a structural theory of corporate cooperation: Inter-organizational directorate ties as a strategy for avoiding market constraints on profits	American Sociological Review	Network theory	Survey, Network analysis	Relation, Network	Autonomy/independence, Relations/ linkages/ ties	New empirical results	This paper highlight the concept of interfirm network autonomy	Border and manager interlocks exhaust the social capital, but there is a need to clarify if such patterns actually generate any profits!	"In conclusion the network model of structural autonomy seems to be accurate in predicting where directorate ties occur in the American economy as cooptive relations, intended to eliminate market constraints." p. 837
Bush Jr, J.B & Frohman, A.L	1991	Communication in a network organization	Organizational Dynamics	Strategic Management theory	Case studies	Firm/ organization	Context, environment, Information technology/ Infrastructure, Knowledge/ competence/ learning	New practical results	This paper discuss how to use information in strategic change processes		"The sequential model has established itself primarily because of its compatibility with the bureaucratic command and control concept of management in complex organizations." p 15
Buvik, A & Grønhaug, K	1999	Interfirm dependence: Environmental uncertainty and vertical coordination in industrial buyer-seller relationships	International Journal of Management Science	Organizational theory	Survey, Hypothesis	Firm/ organization	Uncertainty	Theoretical development	Uncertainty and the change process	Research on the perception of uncertainty	"This indicates that vertical coordination is less appropriate for the purpose of handling the adaptation to environmental uncertainty..." p 451
Byrd, T.A & Sankere, C.S	1995	The strategic risks of implementing global information technology	Information Strategy	Network theory	Briefcase	Firm/ organization	Information technology/ Infrastructure, uncertainty, change	New practical results	Discussing risks and uncertainty in strategic planning		"... uncertainty about environmental and organizational variables tends to increase because the scope of the organizations'..." p1
Camagni, R	1993	Inter-firm industrial networks: The cost and benefits of cooperative behavior	Journal of industrial studies	Network theory, Political economy theory	Literature review/ essay	Firm/ organization	Boundary, Formalization, Nature/Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design, Partner selection	New practical results	Evaluate and explains what differs in informal and formal networks and clusters		"In this paper, a semantic distinction was proposed between the informal network relationship..." p 14 and "... consisting in selected and explicit cooperation agreements..." p 14

Author (s)	Year	Name of article	Name of journal	Theoretical view	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Quotation
Cavinato, J.L	1991	Identifying interfirm total cost advantages: for supply chain competitiveness	International Journal of Purchasing and Material Management	Strategic Management theory	Case studies	Relation	Trust	New practical results	Valuable information for purchasing managers.	"There are several practical implications of this research for purchasing managers" p 14
Chaston, I	1996	Critical events and process gaps in the Danish technological institute SME structured networking model	International Small Business Journal	Network theory	Observations	Network	Partner selection, Success/ survival	New practical results	Model for network success	"...evolved a 5-phase model in which independent individual external to the potential network assumes the role of broker and is responsible for guiding the interfirm cooperation process." p 71
Chaterii, & Manuel T.A	1993	Benefiting from external sources of technology	Research Technology Management	Strategic Management theory	Survey	Firm/ organization	Cooperation/ Collaboration, Strategic issues	New empirical results	This paper gives a recipe for strategic failure and success. Success is found in clear strategic decisions, long run commitments and organizations with skilled personal.	"...recipe for failure, which is based on only a few ingredients! This recipe calls for the following combinations: Lack of strategic clarity; Fluctuating commitment/ resources; Emphasis on short-term results; Weak commercial pull; Wrong people on wrong places; Management inflexibility; Internal resistant; Poor communication./ teamwork." p 26
Chesbrough, H. W. & Teece, D.	1996	When virtual virtuous	Harvard Business Review	Strategic Management theory	Brief-case	Firm/ organization	Strategic issues	New practical results	Advantages and characteristics of virtual organizations.	"Virtual companies coordinate much of their business through the marketplace." p65
Choi, T. Y., Dooley, K. J. & Rungtusanatham, M.	2001	Supply networks and complex adaptive systems: control versus emergence	Journal of Operations Management	Network theory	Literature review/ essay	Network	Flows/ Workflows	Theoretical development	Managing complexity through adaptive systems	"In conclusion, a complex adaptive supply network is a collection of firms that seek to maximize their individual profit and livelihood by exchanging information, products and services with one another." p 365

Author (s)	Year	Name of article	Name of journal	Theoretical view	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
Christie, P.M. & Levary, R.R.	1998	Virtual corporations: Recipe for success	Industrial Management	Network theory	Briefcase	Firm/organization	Partner selection, Success/ survival	Theoretical development	Success of a network depends in which degree customer needs (pull strategy) is central in the network instead of resource utilization (push strategy). Choice of partners, trust, communication, protection of proprietary information, skilled personal and openness to learn (adaptability).		"Analysis of successful and unsuccessful virtual organizations has resulted in the identification of nine factors that may contribute significantly to the success of virtual corporations." p 8
Clark, B.R	1965	Interorganizational patterns in educations	Administrative Science Quarterly	Evolution theory	History review	Firm/organization	Strategic issues	Theoretical development	Economic and organizational trends	"We need a theory of confederative organization or organizational alliance." p 233	"Generalizations developed toward such a theory would reveal many points of contract and overlap in ideas about influence derived from the study of politics as well as from the study of internal administration." p 233
Clemons, E.K & Row, M.C	1992	Information technology and industrial cooperation: the changing economics of coordination and ownership	Journal of Management Information Systems	Transaction cost theory	Briefcase	Relation	Information technology/ Infrastructure	Theoretical development	Information technology can reduce transaction costs and resources can be better utilized through cooperation.		"In this paper we have tried to expand transactions cost economics to shed light on the emergence and structure of cooperative relationships." p 24
Clemons, E.K & Row, M.C	1993	Limits to interfirm coordination through information technology	Journal of Management Information	Transaction cost theory	Case studies	Relation	Information technology/ Infrastructure	New practical results	Explored new approach of product flow		"...Analysis of our study suggests that this resistance is due to the impact of the new coordination..." p 73
Davis, T.R.V & Daring, B.L	1995	How virtual corporations manage the performance of contractors: The super bakery case	Organizational Dynamics	Network theory	Case studies	Network	Relations/ linkages/ ties	New practical results	How performance can be evaluated through measurements such as cost centers and increasing the insight of feedback-systems		"The absence of direct supervision and control over the work of contractors means that managers in virtual corporations need a dependable performance measurement and feedback system." p 71

Author(s)	Year	Name of article	Name of journal	Theoretical view	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
DeToni, G & Nasimbeni, G (1)	1999	Buyer-supplier operational practices, policies and plant performance: results of empirical research	International Journal of Production Resources	Transaction cost theory	Survey, Hypothesis, Comparable (case) analysis	Relation	Flows/ Workflows, Partner selection, Strategic issues	Theoretical development	Questioning how exchange works	Complete description of exchange	"Thus, as predicted by TCE theory, advanced operational buyer-supplier interaction practices, like those promoted by JIT and co-design approaches, seem to be inoperable under traditional, pure market-based mechanisms." p 616
DeToni, G & Nasimbeni, G (2)	1994	Supply networks: Genesis, stability and logistics implications, a comparative analysis of two districts	Omega International journal of management	Transaction cost theory, Network theory, Organizational theory, Agency theory	Case studies, Comparable (case) analysis	Network	Boundary	Theoretical development	Long term cooperation will lead to more successful exchange for both customers and suppliers than traditional market based exchange.		"...deal with inter-organizational relations and the boundary lines between them are not always clearly defined." p 403
Djelic, M-L & Ainamo, A	1999	The co evolution of new organizational forms in fashion industry: A historical and comparative study of France, Italy and the United states	Organizational Science	Evolution theory	History review, Comparable (case) analysis	Firm/ organization	Context, environment, Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Organizational fit is necessary in a fast changing turbulent environment	More research should be done on organizational pilots	"To explore the connection between environmental dislocation and organizational transformations..." p 622
DiStefano, T	1984	Interorganizational conflict: A review of an emerging field	Human Relations	Network theory	Literature review/ essay	Relation	Conflict/ friction/ tension	Theoretical development	A framework of general conflict theory	What technique and methods offer the most successful studies of conflict	"One aim of this paper is to make clear how the avoidance of conflict in the organizational setting..." p 352

Author (s)	Year	Name of article	Name of journal	Theoretical view	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
Donkels, R & Lam-brecht, J	1997	The network position of small business: An explanatory model	Journal of Small Business Management	Network theory	Survey, Comparable (case) analysis	Relation	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	New empirical results	Generating hypothesis of small business networks.	A growing need to departure from small firm and research in the field of networks to entrepreneurial oriented approaches	"With this article, we try to fill the empirical gap by analyzing the causal relationship between entrepreneur- and enterprise-related factors in networks, with the intention of contribution to the understanding of the factors that promote to the formation." p 13-14
Dowling, M.J & Roering, W.D	1996	Multifaceted relationships under competition	Journal of Management Inquiry	Transaction cost theory, Resource dependence	Case studies	Relation	Flows/ Workflows	Theoretical development	Propositions on multifaceted relationships	How does multifaceted relationships affect strategy formulation	"We first describe..." "...using resource dependence and transaction cost theories..." p 155
Duffy, M	1994	The Prescriptions for surviving and thriving in the virtual organization	Public Relation Quarterly	Strategic Management theory	Briefcase	Firm/ organization	Strategic issues	New practical results	How to manage a change with practical tools		"Based on my 15 years as a public relations and marketing communications manager, and in my research as a university professor..." p 40
Dunkerley, D., Spybey, T., & Thrasher, M	1981	Interorganizational networks: A case study of industrial locations	Organization Studies	Transaction cost theory, Political economy theory, Exchange theory	Case studies, Comparable (case) analysis	Relation	Context, environment	New empirical results	This paper view companies as controlling it's environment to maintain a given power position.	Network analysis enable description and nature of relations.	"This case study raises a number of important issues of market-government relations..." p243
Duysters, G., Hagedoorn, J	1995	Strategic groups and interfirm networks in international high-tech industries	Journal of Management Studies	Strategic Management theory	Survey	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Well developed technological companies have their core competence embedded in a structure of strategic groups.	A more dynamic perspective witch concerns changes in strategic groups	"...strategic groups can be found in terms of clusters of companies that share structural and behavioral corporate characteristics." p360

Author (s)	Year	Name of article	Name of journal	Theoretical view	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
Dyer, J. H. & Singh, H.	1998	The relational view: Cooperative strategy and sources of interorganizational competitive advantage	Academy of Management Review	Transaction cost theory, Resource based theory, Network theory	Literature review/ essay, proposition	Relation, firm/ organization, network	Relations/ linkages/ ties	Theoretical development	Comparing the rational view with a resource based view in order to better understand competitive advantage		"Relation-specific assets; knowledge-sharing-routines; complementary resources/ capabilities and; effective governance." p 660.
Ebers, M & Jarillo, J.E	1998	The construction, forms and consequences of industry networks	International Studies of Management and Organizations	Network theory	Comparable (case) analysis	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Governance structures of industry networks		"...respective networks are formed by their societies and regions with their particular institutional structures, by their organizational fields, by social groups, or by features and actions of individual network members." p 12
Edström, A., Höggberg, B & Norbäck, L.E	1984	Alternative explanations of interorganizational cooperation: The case of joint programs and Joint Ventures in Sweden	Organization Studies	Organizational theory	Case studies	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design, Relations/ linkages/ ties	Theoretical development	Multiple perspectives enhance understanding of Joint Ventures rather than the use of conflicting dichotomy explanations.		"The two perspectives are not conflicting but are rather complementary explanations of why organizations engage in joint ventures." p 164
Elg, U & Johansson, U	1997	Decision making in the interfirm Networks as a political process	Organizational Studies	Resource dependence/ Resource based theory, Organizational theory	Case studies, Longitudinal	Network	Decision making	New empirical results	This paper discuss powerful positions and prescribe how one could select forum for better informational access. The paper exemplify explicit political behavior.	This study means that the usefulness and efficiency can not be evaluated objectively. It is infected by a political process	"A theoretical model is developed, demonstrating how motives, structural conditions and moves made by powerful as well as more dependent firms interact in shaping the decision process." p361
Ettl, M., Feigin, G.E., Lin, G.Y. & Yao, D.D	2000	A supply network model with base-stock control and service requirements	Operational Research	Network theory	Literature review/ essay	Relation	Flows/ Workflows	New empirical results	Propose a new model of supply networks		"...describe a model of complex supply chains..." p216

Author (s)	Year	Name of article	Name of journal	Theoretical view	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
Feldman, M.P & Ronzio, C.R	2001	Closing the innovative loop: Moving from the laboratory to the shop floor in biotechnology manufacturing	Entrepreneurship & regional development	Resource dependence/ Resource based theory, Network theory	Archival analysis	Firm/organization	Knowledge/ competence/ learning, Strategic issues	Theoretical development	Discuss special competencies in linear product development process and design.		"...this paper contrasts a model of the virtual corporations with vertical integration..." p2
Feneuille, S	1990	A network organization to meet the challenges of complexity	European management journal	Network theory	Case studies	Firm/organization	Context, environment	New practical results	This paper discusses how complexity could be managed by interfirm networks.		"Thus, without creating superfluous formalistic structures or procedures, it becomes possible to take full advantage of the effects of size, particularly by exchanging experience, sharing know-how and allocating human resources in the best possible way." p 300
Fitzpatrick, W.M & Burke, D.R	2000	Form functions and financial performance realities for the virtual organizations	Sam advanced management journal	Network theory	Brief-case	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	New practical results	Managers of virtual organization should clearly define their target markets, their overall business strategy and list the most important intents of strategic performance.		"This paper seeks to describe various forms of the virtual organization and discuss the implications that this structure has for enhancing the strategic flexibility, competitiveness, and cost efficiency of organizations." p 13
Fombrun, C.J	1986	Structural dynamics within and between organizations	Administrative science quarterly	Evolution theory	Archival analysis, Literature review/ essay	Relation	Autonomy/ independence	New empirical results	Adoption is depending on how the firm works in terms of their complementary power, power, autonomy power and also producing stability in short run and dynamics i the long run	Explanatory studies of collective structures	"capturing the essence of social structure, current interpretations of organization as adaptation, as power, and as culture suffer from three basic failings; (1) they have artificially segregated complementary manifestations of collective life; (2) ...promoted a micro analytic orientation that underplays the embeddedness of individuals in organizations... (3) ...stressed the short-run stability of structures at the expense of the long-run dynamic process of structuring." p 403

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Foss, N.J	1999	Network, Capabilities and competitive advantage	Scandinavian Journal of Management	Resource dependence/ Resource based theory, Network theory	Literature review/ essay	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Clear conceptual suggestions of the network concept and firm capabilities.	"...resource based approach suggests one way to uncover the sources of competitive advantage of the network firm." p 1
Foss, N.J & Koch, C.A	1996	Opportunism, organizational economics and the network approach	Scandinavian Journal of Management	Transaction cost theory	Comparable (case) analysis	Relation	Opportunism, Trust	New empirical results	Outline some marks of identification in relations based on trust.	"... we are led to the conclusion that network analysis is not a serious competitor to transaction cost economics." p203
Galaskiewicz, J	1985	Interorganizational relations	Annual Review of Sociology	Transaction cost theory, Resource dependence/ Resource based theory, Network theory	Literature review/ essay	Network	Antecedent/ origin	Theoretical development	Theoretical overview	"The direct procurement of facilities, materials, products, or revenues to ensure organizational survival has been an overriding reason for establishing interorganizational relations." p 282
Georgantzis, N.C	2001	Virtual enterprise networks: The fifth element of corporate governance	Human Systems Management	Transaction cost theory, Exchange theory	Briefcase	Relation	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Forms and characteristics of virtual enterprise networks	"This essay explores alternative TEG forms, their characteristics and the criteria that bear on the choice of corporate governance: flexible specialization, market uncertainty, product (good service) complexity, reliance on trust, risk, self-organization, shared knowledge, and socio - territorial cohesiveness." p 171
Golden, W & Powell, P	2000	Towards a definition of flexibility: In search of the holy grail	International Journal of Management Science	Strategic Management theory	Literature review/ essay	Firm/ organization	Flexibility	Theoretical development	Conceptualize flexibility	"Flexibility is defined as the capacity to adapt across four dimensions: temporal, range, intention and focus." p 373

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Goldman, S.L	1994	Agile competition and virtual cooperation: The next American century	National Forum	Strategic Management theory	History review and Briefcase	Firm/ organization	Context, environment	Theoretical development	Review of descriptive of agile companies		"Agility refers to the ability of a company to thrive in a competitive environment of continuous and unanticipated market change - to respond quickly to rapidly changing, fragmenting, global markets..." p 44
Grandori, & Soda, G	1995	Inter-firm networks: Antecedents, Mechanics & Forms	Organization Studies	Evolution theory	Literature review/ essay	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	New empirical results	This paper offers an extensive literature review as basis for future models.	Create hypothesis of a model based on this study	"...defining a wide range of network forms and mechanisms using a number of important social, economic and organizational dimensions and showing different coordination properties." p 183
Grandori, A	1997	An organizational assessment of interfirm coordination models	Organization Studies	Evolution theory	Literature review/ essay, Experiment	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Typology of inter-firm organizations but also briefing governance of networks and different coordination mechanisms		"conflicts of interests make the use of both formal obligation contracting guaranteed by external arbitrators and courts and internal systems of rules and authorities effective and efficient at much lower levels of computational complexity." p 913
Gray, B	1985	Condition facilitating interorganizational collaboration	Human Relations	Evolution theory	Literature review/ essay	Relation	Cooperation/ Collaboration, Prerequisites/ pre-conditions/ conditions	Theoretical development	This paper has a general discussion regarding critical conditions in successful interfirm networks.	Comparative analysis between successful collaborations in a different settings	"Successful collaboration, we suggest, depends upon the simultaneous interaction of several conditions at appropriate phases in the process." p932

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Griffith, D.A., & Harvey, M.G	2001	Executive insights: An intercultural communication model for use in global interorganizational network	Journal of International Marketing	Network theory	Propositions	Relation	Culture	New empirical results	This paper argue network success is derived from a proactive approach of establishing an intercultural communication relationships		"The standardization of the process of intercultural communication relationship development across an organization's relationship portfolio can help the operational network achieve economies of scope and scale while allowing for adaptation of specific communication tactics across network dyads." p 97
Gulati, R. (2)	1999	Where do inter-organizational networks come from	American Journal of Sociology	Network theory, Organizational theory, Evolution theory	Hypothesis	Relation, Network	Creation/ Formation/ Evolution/ Emergence/ life cycles, Formalization	Theoretical development	On the basis of an extensive literature review Gulati propose and test a model of networks.		"The results show that both interdependence and network embeddedness factors have a significant impact on new alliance formation." p1475-1476
Gummesson, E	1996	Relationship marketing and imaginary organizations: a synthesis	European Journal of Marketing	Network theory, Strategic Management theory	Case studies	Network	Relations/ linkages/ ties	Theoretical development	Argue about a more common language for relation marketing and bridging the network concept trough marketing.	Find a language and synthesis between RM and NW	"The approach is theory generating, based on syntheses between observations and inductive, empirical studies." p 32
Hagedoorn, J	1993	Understanding the rationale technology cooperation: Inter-organizational modes of cooperation and sectorial differences	Strategic Management Journal	Transaction cost theory	Archival analysis, Hypothesis	Relation	Partner selection, Strategic issues	New empirical results	Introducing different motives for technology cooperation		"...incentives to collaborate. Although there are a large number of motives we have shown that two basic categories, i.e. market and technology-related motives, dominate the scene." p 381

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Håkansson, H	1989	Technological collaboration in industrial networks	European Marketing Journal	Network theory	Survey	Network	Cooperation/ Collaboration, Flows/ Workflows, Partner selection, Trust	New empirical results	Listing important factors in collaboration such as collaborative relations, mutual trust, shared strategies and resource exchange utilization.		"... collaborative relationships are of strategic importance to companies. Second relationships are investment-intensive, which makes the handling of them important. Third, the type of counterpart used for collaboration is important. And fourth, the organic features of relationships must be remembered. p 377
Håkansson, H & Snehota, I	1990	No business is an island: The network concept of business strategy	Scandinavian Journal of Management	Network theory	Hypothesis	Firm/ organization	Relations/ linkages/ ties	New empirical results	Discussing boundaries of an organization and the organizational effectiveness.		"...business organization seems to suggest that enterprise should be conceived as a transaction function rather than production function. Such a concept of enterprise could lead naturally to a shift in focus, away from the control of resources towards the integrations of resources." p 199
Håkansson, H., Havila, V., Pedersen, A.C	1999	Learning in networks	Industrial Marketing Management	Network theory	Case studies	Relation	Knowledge/ competence/ learning	Theoretical development	Learning through relationships		"...relationship has a number of connections there are also a number of interfaces where learning could appear: between production facilities, and between people with different backgrounds and competencies." p 445
Halme, M & Zinaida, F	2000	Small and medium sized tourism enterprises in sustainable development networks	Greener Management International	Network theory	Case studies	Network	Success/ survival	Theoretical development	Success factors in tourism enterprises working in networks		"Within local networks, the overarching goal of the sustainability networks studies was to improve the overall quality of life in the host region and to ensure the long-term capability of survival of that region." p 112

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Hall, R.H., Clark, J.P., Giordano, F.C., Johnson, P.V & Van Roekel, M	1977	Patterns of interorganizational relationships	Administrative Science Quarterly	Exchange theory	Survey, Hypothesis	Relation	Relations/linkages/ties	Theoretical development	Explore rational patterns		"... focuses on dyadic relationship among organizations that deal with problem youth. The analysis demonstrates that the political economic model of interorganizational relationship is useful, that this model loses its explanatory power under some conditions..." p 457
Handy, C	1995	Trust and the virtual organization	Harvard Business Review	Network theory	Brief-case	Network	Trust	New practical results	A perspective of how human resources in virtual organizations have become human asset.		"Trust inevitably requires some sense of mutuality, of reciprocal loyalty." p 48
Harrigan, K.R & Newman, W.H	1990	Bases of interorganization cooperation: Propensity, power, persistence	Journal of Management Studies	Transaction cost theory	Literature review/essay/Case	Relation	Mechanism, Partner selection	Theoretical development	Contribute with framework and key factors in Joint Ventures.	Understanding of interorganizational cooperation in different contexts	"In this article we concentrate on joint ventures because these arrangements highlights the central issues of substantial, continuing cooperation between otherwise independent organizations." p 419
Haugland, S.A & Reve, T	1994	Price, Authority and Trust of international distribution channel relationships	Scandinavian Journal of Management	Transaction cost theory	Survey	Firm/ organization	Authority, Governance, Trust	New empirical results	Developing and testing a model of governance	More studies about how firms combine price, authority and trust and why they chose a specific combination	"In this paper we have argued that price, authority and trust represent three governance mechanisms that can be combined." p 240

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HaYong Jang	1997	Cultural differences in an interorganizational Network: Shared public relations firms among Japanese and American companies	Public relations review	Network theory	Network analysis	Relation	Culture	New empirical results	This paper offer understandings of cultural differences. The paper outlines some differences between networking in Japanese and US companies. Centrality is to a larger extent found in Japanese companies.	More explanatory studies is needed with large samples. Additionally proposing network analysis to better understand interfirm relations.	"Structural equivalence is the extent to which nodes have similar patterns of interaction. However, according to the structural approach, two nodes may have similar attitudes not necessarily because they interact with each other, but because they jointly have a similar position in a network." p 329
Herbert, T.T	1984	Strategy and multinational organization structure: An interorganizational relationship	Academy of management review	Organizational theory	Briefcase	Firm/ organization	Strategic issues	Theoretical development	This paper offer a model of strategy and structure		"The model in this paper offers a format intended to be useful in identifying both under attended areas of research in international management and new approaches to these research questions." p 269
Holmlund, M & Törnros, J.E	1997	What are relationships in business networks	Management decision	Organizational theory, Exchange theory	Briefcase	Relation	Relations/ linkages/ ties	Theoretical development	Typologies of different business networks		"The aim of this paper is to build a marketing model of relationship in a business marketing setting by using relational concepts." p 304
Huggins, R	2001	Inter-firm network policies, and firm performance: evaluating the impact of initiatives in the united kingdom	Research policy	Network theory	Survey	Network	Relations/ linkages/ ties, Trust	Theoretical development	This paper argue that formal rather than informal networks tend to generate economic growth		"This paper explores the strengths and weaknesses of inter-firm networks as a public policy resource..." p 443
Humphrey, J & Schmitt, H	1998	Trust and interfirm relations in developing and transition economics	The journal of development studies	Political economy theory	Literature review/ essay	Firm/ organization	Trust	Theoretical development	Collaboration should be based on trust and voluntary participation.		"This article seeks to extend this debate conceptually and empirically. Section II discusses the meaning of trust and prepares the conceptual ground." p 32

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Izushi, H	1997	Conflict between two industrial networks: technological adoption and inter-firm relationships in the ceramics industry in Seto, Japan	Regional studies	Network theory	Case studies	Firm/ organization	Knowledge/ competence/ learning	New practical results	How can a regional network meet technological change? A case study of a adoption process	"The Seto case suggests two policy implications if regional networks of the industrial district type are to be supported." p 127
Iwashita, S	2001	Custom made housing in Japan and the growth of the subcontractor	Construction Management and Economics	Network theory	Archival analysis	Relation	Flows/ Workflows, Relations/ linkages/ ties	New empirical results	Describing different roles in customer liaison design, such as contractor, subcontractor and super subcontractors.	"There is now a new actor in the market, the super subcontractor. These comprise a subsystem of suppliers of roofs, exterior finishing and carpentry works, who work directly under contract for home-builder..." p 299
Jarillo, C. J.	1988	On strategic networks	Strategic management journal	Network theory	Literature review/ essay	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Conceptual framework and tools to evaluate market attractiveness.	"Those relationships have most of the characteristics of a hierarchical relationship: relatively unstructured tasks, long-term point of view, relatively unspecified contracts." p 34
Jarvenpaa, S., Ives, B	1994	The global network organization of the future: Information management opportunities and challenges	Journal of Management Information Systems	Network theory	Briefcase	Network	Information technology/ Infrastructure	New practical results	The paper tries to predict and explore the future challenges and opportunities dynamic networks.	"Explores the opportunities and challenges the transformation to the dynamic network for presents to the information systems field." p 25
Johanson, J & Mattsson, L-G	1987	Interorganizational relations in Industrial systems-A network approach compared with the TC approach	Interorganizational Journal of Management and Organization	Transaction cost theory, Network theory	Comparable (case) analysis	Relation	Relations/ linkages/ ties, Partner selection	Theoretical development	Multiple theoretical approach using both TCT and Network theory to understand interfirm networks.	"The most important difference between the two approaches is the nature of the relationship. For us, industrial markets are characterized by lasting relationships among firms because such relationships can reduce costs of exchange and production and can promote knowledge development and change." p46

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Jones, C., Hesterly, W.S & Borgatti, S.P	1997	A general theory of Network governance: Exchange conditions and social mechanism	Academy of Management Review	Transaction cost theory, Network theory	Proposition, Literature review/ essay	Network	Governance, Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design, Relations/ linkages/ ties	Theoretical development	Conceptual framework and definitions of network governance		"Our objective in this article is to provide a theory that explains under what conditions network governance, rigorously has comparative advantage..." p 911
Jones, T.J & Bowie, N.E	1998	Moral hazards on the road to the virtual corporation	Journal of Business Ethics Quarterly	Transaction cost theory, Network theory	Literature review/ essay	Relation	Trust, success/ survival	Theoretical development	Conceptual framework of trust		"In this paper, we articulate three explanations for the development of trust. In the rational self-interest (economic) model, trust results from the outcome to an iterated chain of contracts ..." "...model trust is the by-product of the embeddedness of individuals in a web social relations such that values and expectations are commonly shared." p 276
Kanet, J.J., Faisst, W & Mertens, P	1999	Application of information technology to virtual enterprise broker: The case of Bill Epstein	International Journal of Production Economics	Network theory	Case studies	Relation	Broker/ project manager/ brokerage	Theoretical development	Phases of a broker in a virtual enterprise		"We have investigated here the case of Bill Epstein as an example of a virtual enterprise broker." p 32
Kasouf, C.J & Celuch, K.G	1997	Interfirm relationships in the supply chain: The small suppliers view	Industrial Marketing Management	Network theory	Survey, Propositions	Relation	Context, environment, Cooperation/ Collaboration, Complementarity, Change	Theoretical development	What effects relations?		"Barriers to interfirm relationship." Barriers may result from risk exposure or from difficulties in maintaining the alliance." p 479
Kasper, Fuehrer, E.C	2001	Communicating trustworthiness and building trust in interorganizational virtual organizations	Journal of Management	Evolution theory	Propositions, Literature review/ essay	Relation	Trust	Theoretical development	Proposes a theory of trust in interorganizational settings	Search for different types of trust, such as calculate trust	We develop four propositions as a foundation for future research in this developing area. The propositions provide a new perspective on the age-old topic of business trust..." p236

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Khalil, O & Wang, S	2002	Information technology enabled meta-management for virtual organizations	International journal of production economics	Network theory, Strategic Management theory, Communication theory	Brief-case	Relation	Communication, Relations/linkages/ ties	Theoretical development	This paper shed light on virtual organizations role as enhancing efficiency and motivating organizations goal - congruence.	There is a growing need of research regarding IT & meta management to form informational knowledge systems and virtual organizations	"This paper elaborates on meta-management responsibilities, and discusses the role and challenges of IT in support of virtual organizations." p128
Klein, M.M	1994	The virtue of being a virtual corporation	Best review - Life Health Insurance Edition	Network theory, Strategic Management theory	Brief-case	Firm/ organization	Context, environment, Knowledge/ competence/ learning	New practical results	Reengineering helps traditional companies becoming more virtual in terms of faster service, increased efficiency, utilize technology, specialize and become more flexible in responding to change		"...virtual corporation is a reengineered corporation, it has greater customer focus and higher customer sensitiveness, as well as reduced cycle times for new product introduction and order fulfillment processes." p 89
Kogut, B	2000	The network as knowledge: Generative rules and emergence of structure	Strategic management Journal	Network theory	Case studies	Network	Strategic issues	Theoretical development	A case study of Toyota production system		" networks as arising out of generative rules that guide the formation of relationships and code for organizing principles of coordination." p 406
Koon Huat Low, B	1997	Managing business relationships and positions in industrial networks	Industrial marketing management	Network theory	Case studies	Network	Opportunism, Power, Strategic issues	Theoretical development	Extends understanding of given network positions and their relationships as strong and direct ties.		"...by maintaining and investing a number of strong, long-term business relationships with its partners; they must also develop new positions." "... these positions do not exist because business relationships are based on business logic and interpersonal relations that exist among network members." p 190

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Kumar, K & Van Dissel, H.G	1996	Sustainable collaboration: Managing conflict and cooperation in interorganizational systems	Management Information Systems	Transaction cost theory, Network theory, Evolution theory, Exchange theory, System theory.	Literature review/ essay	Relation	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Conceptualizing interorganizational systems and describes clearly different motives of joining an alliance.	"...developing a typology for characterizing interorganizational systems (IOS) along the dimension of interorganization interdependency in interfirm relationships." p279
Kumar, N & Stern, L.W	1993	Conducting interorganizational research, using key informants	Academy of Management Journal	Network theory	Survey	Relation	Knowledge/ competence/ learning	Methodical development, New empirical results	Using informant approach and scrutinize interorganizational relationships	"In this article we examine the use of the key informant methodology by researchers investigation interorganizational relationship." p 1633
Kurland, N.B & Egen, T.D	1999	Telecommunicating: Justice and control in the virtual organization	Organizational Science	Strategic Management theory	Survey, Hypothesis	Group	Communication	New practical results	This paper perform a description of the formalization role and test if formal staff has greater importance than personnel and informal communication	"This exploratory study began empirical inquiry into relationships between and among telecommuting, managerial control..." p 511
Lamming; R., Johnson, T., Zheng, J & Harland, C.	2000	An initial classification of supply network	International Journal of Operations and Production Management	Network theory	Survey, Case studies	Network	Coordination, Factory/ Manufacturing aspects, Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development, New practical results	Classification of different types of supply networks	"The survey indicated that firms within supply networks of unique products generally exchanged less information and knowledge of a sensitive and strategic nature and with fewer but close partners." p 688
Larsen, K.P.T., McInerley, C.R	2002	Preparing to work in the virtual organization	Information and Management	Network theory	Survey	Group	Knowledge/ competence/ learning	Theoretical development	Teams and different types of networks	"The purpose of this paper is to discuss methods and practices used in a cooperative effort to teach graduate students." p 446
Lawrence; T.B., Hardy, C & Philips, N.	2000	Institutional effects of interorganizational collaboration: The emergence of proto-institutions	Academy of Management Journal	Network theory ,Institutional theory	Case studies	Relation	Autonomy/ independence	Theoretical development	Small institutional organizations changing through institutional entrepreneurship	"In this study we explored the institutional effects of collaboration..." p 281

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Lee, C.J	1995	The industrial network of Taiwan's small and medium sized enterprises	Journal Industry Studies	Network theory	Case studies	Network	Context, environment		This particular study examines SME networks in Taiwan and describes different industrial network cores	"This paper will analyze the competitive advantages of these industrial networks." p 75
Levine, S & White, P.E	1961	Exchange as conceptual framework for the study of Interorganizational relationships	Administrative science quarterly	Exchange theory	Case studies	Relation	Relations/ linkages/ ties	Theoretical development	This paper discuss the nature of the exchange concept	"The agreement underlying the exchange. Every exchange is contingent upon a prior agreement, which may be implicit and informal or fairly explicit and highly formalized." p 600
Lin, F-R., Lin S-C	2001	A conceptual model for virtual organizational learning	Journal of organizational computing and electronic commerce	Resource dependence/ Resource based theory, Network theory	Case studies, Literature review/ essay	Relation	Antecedent/ origin, Knowledge/ competence/ learning, Relations/ linkages/ ties	Theoretical development	A conceptual model for virtual organizational learning is offered in this paper.	"We propose a conceptual model for virtual organization learning and describe that transitive memory system, especially in a cyber community." p 173
Loebecke, C & Jeilassi, T	1997	Concept and technology for the virtual organization: The gerling journey	European management journal	Network theory	Case studies	Network	Boundary	New practical results	Implementing technique and virtuous helping insurance firms in their adoption process and reducing risk	"This case study illustrates..." p 138
Lorenzoni; G & Baden-Fuller; C	1995	Creating a strategic center to manage a web of partners	California Management review	Network theory	Case studies, Longitudinal, Literature review/ essay	Network	Broker/ project manager/ brokerage, Effectiveness/ Performance/ outcome, Partner selection, Strategic issues	Theoretical development	Extends the broker concept and calls it strategic center	"In this article, we examine three dimensions of the strategic center: as a creator of value for its partners; as leader, rule setter, and capacity builder and; as simultaneously structuring and strategizing." p 147

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Lynne, M.M., Manville, B & Agres, C.E	2000	What makes a virtual organization work	Sloan Management Review	Network theory	Case studies	Network	Governance	New practical results	How motivate and govern sustainable development of open source products such as Linux	"What motivates people to participate in open-source projects?"
MacMillan, I. C., Hambrick, D. C. & Penning, J. M.	1986	Uncertainty reduction and the threat of supplier retaliation: Two views of the backward integration decision	Organization Studies	Strategic Management theory	Survey	Relation	Flows/ Workflows	New practical results	Concluding remarks present implications for vertical integration	"explore some of the factors that shape this important decision by studying the backward integration..." p 263
Magretta, J	1998	Fast, Global, and entrepreneurial: supply chain management, Hong Kong style	Harvard Business Review	Network theory	Case studies	Firm/ organization, Network	Antecedent/ origin, Boundary, Flows/ Workflows, Strategic issues	New practical results	This paper is an example of a case study of Hong-Kong's largest export trading company	"Supply chain is about buying right things and shortening the delivery cycles." p 106
Malone, M & Davidow, W	1992	Virtual corporation	Industrial Management	Strategic Management theory	Briefcase	Firm/ organization	Knowledge/ competence/ learning, Strategic issues	New practical results	This paper is build on virtual products with virtual organizations	"what does your company need to do to survive and thrive in this period of transition." p 103
Mason-Jones, R & Towill, D.R	1999	Total cycle time compression and the agile supply chain	International Journal of Production Economics	Strategic Management theory	Experiment	Firm/ organization, Network	Flows/ Workflows	New practical results	Practical implications while implementing agile	"Agility means using market knowledge and a virtual corporation to exploit profitable opportunities in a volatile marketplace." p 61
Mavondo, F.T & Rodrigo, E.M	2001	The effect of relationships on interpersonal and interorganizational commitment in organizations conducting business between Australia and China	Journal of Business Research	Network theory	Survey, Hypothesis, Literature review/ essay	Relation	Relations/ linkages/ ties	Theoretical development	Interpersonal commitments are antecedents to interorganizational commitment	"empirically tests a conceptual model of business relationships..." p 111
Miles, R.E & Snow, C.C (3)	1995	The Network firm	Organizational Dynamics	Network theory	Case studies	Relation, Group, Firm/ organization	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	New practical results	Building the spherical network organization - common barriers.	"In this article we describe the concept of a spherically structured firm" p 5

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Miles, R.E & Snow, C.C (1)	1992	Causes of failure in NW organizations	California management review	Network theory, Political economy theory	Briefcase	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	This paper examine typology and evolution of interfirm network	"The stable network - has its roots in the structure and operating logic of the functional organization. It is designed to serve a mostly predictable market by linking together independently owned specialized assets along a given product or service value chain." p 63
Miles, R.E & Snow, C.C (2)	1986	Organizations: New concepts for new forums	California management review	Strategic Management theory	Briefcase	Network	Strategic issues	Theoretical development	Gives a critical discussion to what forms a dynamic network	"A new organizational form - a unique combination of strategy, structure, and management processes that we refer to as the dynamic network. The new form is both a cause and a result of today's competitive environment." p 62
Miller, K & Scott, C.R	1995	Communication and coordination in an inter-organizational system: Service provision for the urban homeless	Communication research	Network theory, Grounded theory	Case studies	Network	Relations/ linkages/ ties	New empirical results	Findings of this paper is rooted in grounded theory approach on IOR	"Presents a grounded theory of coordination and communication." p 679
Milward, B.H & Provan, K.G	1998	Principles for controlling agents: The political economy of Network structure	Journal of public administration research and theory	Network theory, Evolution theory	Survey	Relation	Effectiveness/ Performance/ outcome	New empirical results	This paper offer empirical results that gives a better theoretical understanding	"The finding that monopoly was the most effective organization was not a popular conclusion, although the conclusion was based on only one study, which limits generalizability." p 218
Möller, K.K & Halinen, A	1999	Business relationships and network: Managerial challenge of network era	Industrial marketing management	Network theory, Strategic Management theory	Literature review/ essay	Network	Autonomy/ independence, Strategic issues	Theoretical development	This paper gives an extensive theoretical discussion to inter-firm networks from a managerial point of view	"We propose a network management framework that is used for discussing the current managerial implications of the emerging industrial network theory..." p 413

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Molnar, J.J & Rogers, D.L	1979	A comparable model of interorganizational conflict	Administrative Science Quarterly	Evolution theory	Survey	Relation	Conflict/friction/tension	Methodical development	This paper model interfirm conflicts		"This study differed from many others because it focused on comparative properties of organizations and not on properties of the organizations individually." p 420
Murto-Koivisto, E., Routamaa, V & Vesalainen, J	1996	The perquisites for different types of successful interfirm cooperation in the SME sector	Journal of Enterprising Culture	Network theory	Case studies, Observations, Longitudinal	Network	Nature/Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development, New empirical results	This paper clearly describe typologies of different SME interfirm networks		"...based on a longitudinal research project, stresses the importance of distinguishing between various types of SME cooperation." p 109
Muskin, J.B	2000	Interorganizational ethics: Standards of behavior	Journal of Business Ethics	Strategic Management theory	Case studies, Literature review/ essay	Relation	Ethics	Theoretical development	In this study one receive framework that give the elements in Japanese culture	Propose studies regarding incorporate ethics that respond to globalization and its forces.	"Trust, in turn, is the complex of business behaviors that organizations mutually rely upon as a basis for committing to, entering, and sustaining a business relationship." p 283
Nassimbeni, G	1998	Network structures and coordination mechanism	International Journal of operations & Production Management	Transaction cost theory	Literature review/ essay	Relation	Nature/Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Framework for the classification of the chain Networks structures		"This article intends to: point out a few basic typologies within the variety of network structures recurrent in the literature; analyze the main interdependency forms and coordination mechanisms operating on them. p 539
Naylor, B.J., Naim, M.M., & Berry, D	1999	Legality: Integrating the lean and agile manufacturing paradigms in the total supply chain	International Journal of Production Economics	Network theory	Case studies, Comparable (case) analysis	Network	Flows/ Workflows	New practical results	Comparable study of two different paradigms, agile and lean		"Leanness means developing a value stream to eliminate all waste, including time, and to ensure a level schedule." p 108

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Nooteboom, B	1999	Innovation and interfirm-linkages: new implications for policies	Research Policy	Resource dependence/ Resource based theory	Literature review/ essay	Firm/ organization, Network	Motives/ drivers/ reasons/ causes	New practical results	This paper contributes with understanding governance based on trust.	"Horizontal co-operation, between firms with similar products in the same markets, raises suspicions of collusion, but here also the central issue is whether horizontal alliances limit entry of new firms, products or technologies. p 794
O'Donnell, A., Gilmore, A., Cummins, D., Carson, D	2001	The network construct in entrepreneurship research: A review and critique	Management Decision	Network theory, Exchange theory	Briefcase	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design, Relations/ linkages/ ties	Theoretical development	This paper follow different nature of different networks	"This paper begins by addressing the issue of level of analysis in an entrepreneurial context." p 749
Oliver, C.	1991	Network relations and loss of organizational autonomy	Human Relations	Resource dependence/ Resource based theory	Survey	Firm/ organization	Interdependence/ dependence	Theoretical development	An interesting question is addressed in this paper, viz autonomy plays in a network	"This study is among the first to examine organizational autonomy in inter-organizational relations and to contrast multiple types of relations as a basis for predicting the establishment of these relations." p 959
Olkkonen, R., Tikkanen, H & Alajoutsijärvi, K	2000	The role of communication in business relationships and networks	Management Decisions	Network theory	Literature review/ essay	Relation	Relations/ linkages/ ties	Theoretical development	This paper is conceptual framework which increase the understanding of communication processes in both dyadic interfirm networks.	"a conceptual framework on the role of communication in business relationships and networks is proposed." p 403
Osborn, R & Hagedoorn	1997	The institutionalization and evolutionary dynamics of interorganizational alliances and network	Academy of Management Journal	Transaction cost theory	Briefcase	Relation	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	This paper offer a review of different alliances	"...mix of theoretical perspectives and methodologies to understand the formations, evolution, operation and outcomes of organizational alliances and networks." p 261

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Oxley, J.E	1998	Institutional environment and the mechanism of governance: The impact of intellectual property protection on the structure of inter-firm alliances	Journal of Economic Behavior & Organization	Transaction cost theory/ Institutional theory	Survey, Hypothesis	Relation	Governance	New empirical results	Testing TCT in order to examine the costs of governance.		"... governance of international alliances is described..." p 285
Park, S.H	1996	Managing an inter-organizational Network	Organizational Studies	Transaction cost theory	Case studies, Comparable (case) analysis	Relation	Cooperation/ Collaboration	New practical results	What is risk and costs in collaboration? How can independent firms can improve competitive advantages and minimize transaction costs and maintain flexibility. Also implications of how to understand differences within various networks	More explorative, more research on environmental factors, Find out what the attributes for transaction costs are if you look at the number of companies involved in the network	"...considering risk and cost involved in working with others." p 795
Parkin, R.J	1999	Cooperative inter-firm relations: A game theoretic approach and application to furniture research	Kyklos	Game theory	Case studies	Relation	Relations/ linkages/ ties, Trust	Theoretical development	Hypothesize that interfirm cooperation and exchange is maintained by tight relationship.		"Describes a model demonstrating that inter-firm cooperation is best fostered by repeated contact, low discount rates and the clustering of cooperative firms." p 63

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Pfeffer, J. & Nowak, P.	1976	Joint ventures and interorganizational interdependence	Administrative Science Quarterly	Transaction cost theory, Resource based theory, network theory, exchange theory	Survey, hypothesis	Relation, network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	This paper explores fragments in risky behavior. Empirical findings visualize that those who enjoyed many joint ventures tend to be more risk willing, than by those affiliating oneself in joint ventures for the first time.	"In analyzing linkages among organizations, several variables could be analyzed: (1) the number of linkages a given organization has with its environment; (2) the intensity, formalization, standardization, duration, and reciprocity characterizing the relationship between two organizations; and (3) the presence of a link between organizations and the pattern of that linkage." p 399
Phillips, A.	1960	A theory of interfirm organization	Quarterly Journal of Economics	Organizational theory	Literature/ review/ essay	Relation, network	Decision making, Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Contribution of this paper is that decision and decision making should benefit from a shared decision interest.	"A combination of organization theory and the theory of small groups suggest four generalizations concerning various structures of complex oligopolistic markets and the efficiency of interfirm organizations." p 607
Pihkala, T., Varanmäki, E., & Vesalainen, J	1999	Virtual organization and the SME: A review and model development	Entrepreneurship and Regional Development	Resource dependence/ Resource based theory, Network theory	Case studies	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	SME and entrepreneur virtual organization	"...review of the literature on networking and resources, which result in a theoretical framework for the analysis of the varying conditions and characteristics of the four types of SME:s..." p 335
Poon, T.S-C	1998	Inter-firm networks and industrial development in the global manufacturing system: Lesson from Taiwan	The Economic and Global Labor Relations Review	Network theory	Case studies	Network	Context, environment, Creation/ Formation/ Evolution/ Emergence/ life cycles, Prerequisites/ preconditions/ conditions	Theoretical development	Roles of the state and private sector in creating interfirm networks	"...horizontal cooperative production network in which firms cooperate with one another on a complimentary basis to obtain, for instance special components or perform specific kinds of processing service." p 264

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Porter, A.M	2000	The virtual corporation: Where is it?	Purchasing	Network theory	Survey	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Central topic is outsourcing		"...survey of 1400 of the nation's largest procurement organizations finds no widespread trend toward outsourcing of manufacturing activities." p 40
Powell, W.W	1990	Neither market Nor Hierarchy	Research in Organizational Behavior	Network theory	Comparable (case) analysis	Relation	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Discuss whether reputation of fair minded and successful exchange results in a clear economic benefits		"I cull the literature in a number of social science and management fields and provide examples of a wide range of organizational arrangements that can be characterized as networks." p 295
Powell, S & Gallegos, F	1998	Securing virtual corporations	Interfirm strategy: Strategic executive journal	Network theory, System theory	Briefcase	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Findings regard to strategic planning and goals in virtual organizations		"The term virtual corporation refers to what many analysts believe will be the successful 21st century competitor." p 34
Pre-maratne, S.P	2001	Network resources and small business growth: The experience in Sri Lanka	Journal of small business management	Network theory	Survey, Hypothesis	Relation	Relations/ linkages/ ties	Theoretical development	The paper discuss how entrepreneurs collect and pool resources to the firms within the network and thus increase performance	Searching for opportunity costs of networks and evaluating the benefits of it.	"The success of small business enterprises depends on informal personal networks" p 363
Provan, K.G & Millward, B.H (1)	1995	A preliminary theory of interorganizational network effectiveness	Administrative science quarterly	Transaction cost theory, Network theory	Case studies, Comparable (case) analysis, Literature review/ essay	Group	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Methodical development	Provide understanding of network and it's effectiveness. This paper also argue that success of SMEs is dependent on a personal network.	Recommends longitudinal studies emphasize the importance of using the suited methods	"This study uses what Yin (1984) has described as a case survey approach, in which multiple levels of analysis (individual, agency, and network levels) are used to develop an in-depth picture of a single case." p 35

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Provan, K.G & Sebastian, J.G (2)	1998	Network within Networks	Academy of Management Journal	Transaction cost theory, Network theory	Survey	Individual Group	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration Composition/ Types/ Design	Theoretical development	Suggest different sources to network performance		"This study explored the use of cliques analysis for explaining network effectiveness." p 453
Provan, K.G (1)	1983	The federation as an interorganizational linkage network	Academy of Management Review	Network theory	Hypothesis, Compare (case) analysis	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Typology of different network characteristics	To test these hypotheses empirically	"This paper examines the federation as a unique type of interorganizational linkage network, first discussing the reasons why organizations may form or affiliate with a federation and then describing the various types of federations that exist." p 79
Provan, K.G (2)	1982	Interorganizational linkages and influence over decision and making	Academy of Management Journal	Resource dependence/ Resource based theory, Network theory	Survey, Hypothesis	Relation	Interdependence/ Dependence	Theoretical development	Empirical testing of relations between different nodes	How and in what ways nodes modify their resource dependence	"This study examines the linkages between one group of organizations and an important and powerful supplier of scarce resources." p 444
Provan, K.G & Sebastian, J.G (1)	1996	Interorganizational cooperation in community mental health: A resource based experience	Medical Care Research & Review	Network theory	Survey, Hypothesis, Comparable (case) analysis	Group	Relations/ linkages/ ties	New practical results	Discuss how resource allocation in non-profit system		"Because resources are critical not only for the survival of health services organizations but for defining what they do and how they do it, the acquisition, utilization, and general availability of resources seem to be key factors for explaining why some agencies are more extensively involved than others..." p 104
Pyatt, R.T	1996	Chinese business networks and entrepreneurial clans in Thailand	Asia Pacific Business Review	Network theory	Survey	Network	Opportunism, Trust	Theoretical development	Collaboration in networks & clans are highly important in understanding future firm		"The cousin of power and influence is trust." p 5

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Pyatt, R.T & Trimarchi, M	1998	Inter-organizational interactions in intra-Asia business: A four country study	Asia Pacific Business Review	Network theory	Survey	Relation	Relations/ linkages/ ties	Theoretical development	How customers aspects in terms of their demand can be explained or fulfilled through interaction		" strategies that focus on both commercial and technical competence aspects, as well as factors which help to consolidate existing relationships: factors as emphasized by the interactions approach." p48
Rae, L	1998	Knowledge sharing and the virtual organization: Meeting 21:st century challenges	Thunderbird International Review	Organizational theory	Case studies	Network	Knowledge/ competence/ learning	New practical results	Organizational development and knowledge sharing		"organizations do not need more control and technology." p 540
Ramahandran, K & Ramnaryan, S	1993	Entrepreneurial orientation and networking: Some Indian evidence	Journal of Business Venturing	Resource dependence/ Resource based theory, Network theory	Survey, Case studies, Propositions	Relation	Broker/ project manager/ brokerage, Context, environment, growth, Interdependence/ dependence	New empirical results	Entrepreneur as broker and society development growth maker	Propose increased number of entrepreneurs in development areas with an network thinking	"...networking behavior of pioneering entrepreneurs, it was found that pioneering entrepreneurs employed interpersonal networking to a larger extent to obtain critical resources." p 521
Richardson, J	1993	Parallel sourcing and supplier performance in the Japanese automobile industry	Strategic Management Journal	Strategic Management theory	Comparable (case) analysis	Network	Relations/ linkages/ ties	Theoretical development, New empirical results	Long term relationships and certain problems with supplier performance		"The buyer incurs the setup cost for several similarly qualified suppliers to reduce trading costs and competitiveness costs of opportunistic supplier behavior." p 348-349
Richter, F-J	1994	The emergence of corporate alliance network-conversion to self-organization	Human Systems Management	Network theory	History review, Literature review/ essay	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Conceptualizing alliance networks	Suggest studies about inherent power relations.	"Three promising features of self-organizing networks are proposed: recursively, redundancy, and self-consciousness." p 19

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Riggins, F-J	1994	Interdependent benefits from interorganizational systems: Opportunities for business partner reengineering	Journal of Management Information Systems	Network theory	Survey, Hypothesis	Relation	Relations/ linkages/ ties	New empirical results	This paper discuss business partner reengineering and interfirm systems	Game theory modeling risk in affiliation with other external sources.	"...game theoretic modeling should be conducted to arrive at efficient mechanisms to distribute the surplus generated from interorganizational systems." p 55
Ring, P.S & Van de Ven, A.H	1994	Development processes of cooperative interorganizational relationships	Academy Management Review	Network theory	Observation Longitudinal	Individual	growth, Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design, Trust	New empirical results	Take a qualitative look at the nature of IOR, trust and what is generating growth in network organizations	Study development processes of trust	"...a conceptual framework for explaining how cooperative interfirm relations emerge, grow, and dissolve over time." p 91
Ritter, T	1999	The networking company: Antecedents for coping with relationships and networks effectively	Industrial Marketing Management	Network theory	Survey	Relation	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	New practical results	Manager implications and conceptualizing relations in networks	Suggest hypothesized relationships	"Corporate culture is probably the most difficult precondition to improve because it can be done only in the long run, if at all." p 478
Ross, A., Venkataraman, M.A & Ernstberger, K.W	1998	Reconfiguration the supply network using current data	Decision Sciences	Network theory, Strategic Management theory	Case studies, Literature review/ essay	Network	Coordination	Methodical development	Method development	Extend the proposed model to mathematical distribution	"This paper presents a methodology for reconfiguration of an existing supply chain network." p 707
Ross, A.D	1998	A two-phased approach to supply network reconfiguration problem	European Journal of Operational Research	Strategic Management theory	Case studies	Network	Flows/ Workflows	Theoretical development	This paper contribute with strategic planning and simulations		"The computational design of this study systematically varies the problem parameters, and systematically varies specific simulated annealing control parameters." p19
Ross, A. D.	2000	Performance-based strategic resource allocation in supply networks	International Journal of Production Economics	Strategic Management theory	Simulation method	Network	Strategic issues	Methodical development	Exploring the distribution performance maximization through heuristic testing of both planning and structural model		"We address the strategic nature of defining service areas and allocating resources to them." p 256

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Rothaermel, F.T	2001	Virtual internet communities and commercial success: Individual and community-level theory grounded in the typical case of time-zone.com	Journal of Management	Network theory	Proposition, Literature review/ essay/ Case	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Internet communities are innovative organization-forms	Interesting to confirm or falsify proposed model.	"This paper attempts to develop theory at two levels..." "The theory presented here is grounded in a case study..." p 299
Rowley, T., Behrens, D & Krackhardt, D	2000	Redundant governance structures	Strategic Management Journal	Network theory	Survey, Case studies	Relation	Boundary, Relations/ linkages/ ties, Trust	Theoretical development	Strong and weak ties and how they are related to performance		"Firms enter strategic alliances with competitors to gain access to external resources, share risks and cost, or pool complementary skills." p 371
Schopler, J.H	1987	Interorganizational groups: Origins, structures, and outcomes	Academy of Management Review	Exchange theory, System theory, Small group theory	Literature review/ essay	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Generating hypothesis out of a model dealing with interfirm groups		"Interorganizational groups are composed of members, representing parent organizations and community constituencies, who meet periodically to make decisions relevant to their common concerns, and whose behavior is regulated by a common set of expectations." p 703
Sengupta, S	1995	Some antecedents of exclusivity in bilateral inter-organizational relationships	Marketing Letters	Transaction cost theory, Network theory, Organizational theory	Survey	Relation, Firm/ organization	Relations/ linkages/ ties		This paper is tailored to importance of exclusive retail interfirm networks.		"We test relationships between exclusivity and antecedent variables from transaction-cost analysis, resource-dependence theory, and organization theory. p 33
Shao, Y.P., Liao, S.Y & Wang, Q	1997	A model of virtual organizations	Journal of Information Science	Network theory	Case studies	Relation	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Discuss and key elements and conceptualize and operationalized organizational behavior	More research is demanded to understand the impact of new technology.	"Four key characteristic variables of virtual organization are discussed in this paper." p 311

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Schermerhorn, J.R & Shirland, L.E	1981	Hospital administrator left needs for interorganizational cooperation and actual cooperative outcomes by their hospitals	Decisions Sciences	Network theory, Political economy theory, Exchange theory	Survey, Hypothesis	actor/ organization	Relations/ linkages/ ties	Theoretical development	Organizations protect certain resources and the authors suggest that organizations should rather develop the exchange bases with other firms	Exploring decision processes in interorganizational cooperation	"This paper present an empirical study that combines data gathered at both the individual and organizational levels of analysis in order to gain further insight into the dynamics of interorganizational cooperation." p 487
Snow, C., Miles, R.E	1992	Managing 21:st century network organizations	Organizational Dynamics	Network theory	Archival analysis, Literature review/ essay, Briefcase	Network	Broker/ project manager/ brokerage, Management aspects, Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design, Strategic issues	Theoretical development, New practical results	This paper discuss the role of interfirm network its opportunities in a global competition		"For these smaller, more adaptive companies, the global economy contains not only an increasing number of competitors but also more candidates for outsourcing and partnering relationships." p 8
Sotto, R	1997	The virtual organization	Accounting Management & Information Technology	Strategic Management theory	Literature review/ essay, Briefcase	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Discuss axioms to extend the ontological status of information technology in organizations		"...point out certain basic ontological dimensions of information technology of relevance to organizational action..." p 38
Speier, C., Harvey, M.G & Palmer, J	1998	Virtual management of global marketing relationships	Journal of World Business	Transaction cost theory	Case studies	Relation	growth, Risk/pitfall	Theoretical development	Contribute with numerous typologies.		"... briefly describe virtual organizations that can be used in a marketing context." p 264

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Staples, D.S., Hulland, J.S & Higgins, C.A	2000	A self-efficiency theory explanation for the management of remote workers in virtual organizations	Organizational Science	Strategic Management theory, Self-efficacy theory	Hypothesis.	Network	Management aspects	New practical results	This paper discusses different roles of managers and heed about their listening skills as the most critical personal quality.	"...self-efficacy beliefs form a central role in the regulatory process through which an individual's motivation and performance attainments are governed. Self-efficacy judgments also determine how much effort people will spend on a task and how long they will persist with it. People with strong self-efficacy beliefs exert greater efforts to master a challenge while those with weak self-efficacy beliefs are likely to reduce their efforts or even quit." p 759
Stern, R.N	1979	The development of an interorganizational control networks: The case of intercollegiate athletics	Administrative Science Quarterly	Network theory	History review	Network	Relations/ linkages/ ties	Theoretical development	This paper argue network analysis do not fully explain the structures. Stern argues there is several contextual factors all important to understand the structure. Hence is complementary information needed to fully understand the setting of interfirm structures!	"Network analysis must consider the total context in which interorganizational activity occurs. Beyond the measurable determinants of network structure. It must examine information on process, political interests, historical development, and environment in order to avoid empty descriptions of interorganizational relationships." p 265
Strader, J.S., Lin, F.R & Shaw, M.J	1994	Information infrastructure for electronic virtual organization	Decisions support systems	Network theory	Comparable (case) analysis/ simulations	Group	Communication	New practical results	This paper proposes that more accurate information systems may utilize the collaboration processes and increase resource allocation.	"For our study we simulate the operational performance of traditional supply chain networks (SCN) and compare it with their performance of a more virtual (SCN) supported by a improved information structure."

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Sydow, J & Wideler, A	1998	Organizing and evaluating interfirm networks: A structuralist perspective on Network processes and effectiveness	Organizational Science	Social theory	Literature review/ essay	Relation	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Briefing the theory of structures and studying the interfirm network		"...interfirm network is conceived as an institutional arrangement among distinct but rated for profit organizations which is characterized a special kind of network relationship, a certain degree of reflexivity, and a logic of exchange that operates differently from that of markets and hierarchies." p 266
Symon, G (1)	2000	Information and communication technologies and the network organization: A critical analysis	Journal of Occupational and Organizational Psychology	Labor process theory	Literature review/ essay	Firm/ organization	Information technology/ Infrastructure, Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	New practical results	Discuss the growing need of conceptualizing and questioning if network really is a new form. Facing critique against network concept.		"...what extent ICT can actually bring these changes about and to what extent they can support the new structures and new way of working suggested." p 394
Talluri, S., Baker, R.C & Sarkis, J	1999	A framework for designing efficient value-chain networks	International Journal of Production Resources	Network theory	Survey	Network	Context, environment, Flows/ Workflows	Theoretical development	Value-chain networks can enhance the ability to respond to customer expectations and needs in a satisfying way	Suggest research that takes departure form broker perspective used in this paper to a process perspective.	"A stable network organization engages in a moderate level of outsourcing. Usually, in this type of network, a set of vendors support a lead firm. Dynamic networks are formed by a group of independent companies." p 134
Talmud, I & Mesch, G.S	1997	Market embeddedness and corporate instability: The ecology of inter-industrial networks	Social Science Research	Resource dependence/ Resource based theory, Network theory, Exchange theory	Survey, Archival analysis, Hypothesis	Relation	Relations/ linkages/ ties	Theoretical development	This paper discuss strong and weak ties in Israeli companies,	There is a growing demand for sources that assess the length of ties to political capital its importance for performance.	"The first part of this paper presents the analytical research problem, using models of social capital and structural models of exchange." p 419

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Tseng, C.H., Yu, C.M.J & See-too, D.H.W	2002	The relationship between types of network organizations and adoption of management mechanism: An empirical study of knowledge transactions of MNC's subsidiaries in Taiwan	International business review	Network theory, Evolution theory, Network theory	Survey, Hypothesis, Literature review/ essay	Relation	Knowledge/ competence/ learning	Theoretical development	This paper discuss knowledge transactions and processes to change in light of management in multinational corporations	"Considering the knowledge transactions between headquarters', subsidiaries, and local firms MNCs subsidiaries are classified into three types of network organization in this research." p 212
Tsuchiya, T & Tsuchiya, S	1999	Policy exercise: An essential enabler of virtual corporation	International journal of production economics	Evolution theory, Organizational theory	Literature review/ essay	Firm/ organization	Knowledge/ competence/ learning	Methodical development	This paper contribute with new methods of learning	"In virtual corporation, companies can share costs, skills, and access to global markets, with each partner contributing what it's best at." p 221
Tyler, K., McGirr, D & Stanley, E	1998	Conceptualizing: Technology, relationships, and time in a financial services virtual organization	The service industries journal	Marketing theory	Case studies	Firm/ organization	Strategic issues	Theoretical development	Empowering employees increased the total effectiveness.	"The aim of this research was therefore to analyze relationships and the use of technology in a financial services network." p 71
Us-diken, B	1983	Interorganizational linkages among similar organizations in Turkey	Organization studies	Network theory, Organizational theory, Evolution theory	Survey	Relation	Relations/ linkages/ ties	Theoretical development	Small and infant organizations join networks in order to gain strategic power	"Results have shown that cooperation can and does develop among large number of competing organizations." p 161
Van der Aalst, W	1998	Loosely coupled interorganizational workflows: modeling and analysis workflows crossing organizational boundaries	Information and management	Network theory	Hypothesis	Network	Boundary, Flows/ Workflows	New empirical results	Modeling and analyzing workflows.	"Interorganizational workflow offers companies the opportunity to reshape business processes beyond the boundaries of their own organizations." p 67-75
Van der Meer-Kooistra, J & Vosselman, E.G.J	2000	Management control of interfirm transactional relationships: The case of industrial renovation and maintained	Accounting, Organizations and society	Network theory	Case studies	Relation	Opportunism, Trust	Theoretical development	New forms of outsourcing add mutual dependence and closer relations	"The new form of outsourcing makes for a closer relation between outsourcer and contractor, so that mutual dependence increases." p 74
Van de Ven, A.H	1976	On the nature, formation and maintained of relations among organizations	Academy of management review	Organizational theory	Hypothesis	Firm/ organization	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	New empirical results	Framework to different resource dependence exchange systems	"This article attempts to answer these questions for practical and theoretical reasons." p 24

Author (s)	Year	Name of article	Name of journal	Theoretical view	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
Van de Ven, A.H & Walker, G	1984	The dynamics of inter-organizational coordination	Administrative Science Quarterly	Network theory, Organizational theory	Survey, Longitudinal Hypothesis	Relation	Communication, Relations/linkages/ties	Theoretical development	Discuss the role of resource dependencies in communication processes		"...examines and compares patterns of coordination among clusters of organizations." p 19
Van de Ven, A.H., Walker, G & Liston, J	1979	Coordination patterns within an inter-organizational network	Human Relations	Organizational theory	Survey	Group	Relations/linkages/ties	New empirical results	Discuss different motives on why companies get involved with one another in interfirm networks (i.e. Resources, transactions, direct services, planning and coordination)	Results should be tested with hypotheses.	The longitudinal research reported here... p 598
Venkatraman, N & Henderson, J.C	1998	Real strategies of virtual organization	Sloan Management Review	Network theory	Briefcase	Firm/ organization	Culture, Strategic issues	New practical results	Practical implications for making transaction to new businesses		"...study to conceptualize the architecture of virtual organizing." p 33
Vopentest a, A., Frega, N. & Muzzupapa, M	2001	Models and methodology for simulating virtual enterprising in educational environment	European Journal Engineering Education	Network theory	Experiment	Network	Information technology/ Infrastructure	Methodical development	Simulating virtual enterprise on the web by using experiments of an uncertain world		"Our work aims to contribute to creating a paradigm shift in educational engineering by providing innovative teaching methods which are relevant to modern engineering practice." p 392
Voss, H	1998	Virtual organization	Strategy & Leadership	Network theory	Briefcase	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	New practical results	Characteristics of network and virtual organizations		"...foundations for building in-depth research. In small Companies, in large networks, as shown in the accompanying box, is one of the scenarios." p 12
Walters, D & Buchanan	2001	The new economy, new opportunities and new structures	Management decision	Network theory	Briefcase	Network	Motives/ drivers/ reasons/ causes	Theoretical development	Structure and forces in the new economy		"Successful virtual enterprises are those that are planned. Companies in successful collaboration have clear plans concerning the type and extend of their involvement." p 831

Author (s)	Year	Name of article	Name of journal	Theoretical view	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
Weisenfeld, U., Fisscher, O., Pearson, A & Brockhoff, K	2001	Managing technology as a virtual enterprise	R & D Management	Resource dependence/ Resource based theory, Network theory	Survey, Case studies, Literature review/ essay	Network	Relations/ linkages/ ties	Theoretical development	Virtual corporations share R&D information and resources in order to achieve flexibility and rapidly respond to change and global competition	More research is needed on practical problems of different commitments, information management and marketing	"In this paper we discuss the approach taken by one particular regional body" p 323
Westphal, J.D., Seidel, M-D.L., Stewart, K.J	2001	Second-order imitations: Uncovering latent effects on board network ties	Administrative Science quarterly	Network theory, Strategic Management theory	Survey, Longitudinal, Hypothesis	Relation	Relations/ linkages/ ties, Strategic issues	Theoretical development	Board interlocks affect strategic decision making such as second order imitation		A long tradition of research in organization theory has examined the diffusion of technology, policy, and strategy through social networks." p 717
Wether JR, W.B	1999	Structure-driven strategy and virtual organization design	Business Horizons	Network theory, Strategic Management theory	Briefcase	Network	Context, environment, Knowledge/ competence/ learning, Relations/ linkages/ ties	New practical results	Strategies in successful companies		"Successful organizations adapt to their environment." p 13
Whetten, D.A	1981	Interorganizational relations: A review of the field	Journal of Higher Education	Network theory	Survey, Literature review/ essay, Document search method,	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design, Partner selection	Theoretical development	Steps for creating coordination	Important that future research examine more closely the long tradition in sociology	"... purpose of this article is to review the research conducted on these agreements. " p1
Whetten, D.A & Leung, T.A	1979	The instrumental value of interorganizational relations: Antecedents and Consequences of linkage formation	Academy of Management Journal	Organizational theory	Survey, Hypothesis	Firm/ organization	Autonomy/ independence, Decision making	Theoretical development	How can interaction process be enhanced	Suggests that research in the field need to be more sensitive to negative effects of interorganizational relationships	"Finally, these results suggests that research in this field needs to be more sensitive to the negative effects of interorganizational relationships." p 342

Author (s)	Year	Name of article	Name of journal	Theoretical view	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Quotation
Wiesenfeld, B.M., Raghuram, S. & Garud, R	2001	Organizational identification among virtual workers; The role of need affiliation and perceived work-based social support	Journal of Management	Evolution theory	Survey, Hypothesis	Firm/ organization	Behavior	Theoretical development	Highlight the importance of individual settings in the virtual organizations	"In sum, the present study explores the relationships between need for affiliation, work based social support, and the organizational identification of virtual workers." p 227
Wildeman, L	1998	Alliances and networks: The next generation	International Journal of Technology Management	Network theory	Survey	Network	growth, Partner selection	Theoretical development	Lack of complementarity will lead to disbanding	"...motives for forming alliances. Most important are complementary skills (especially in R & D), market access. (particularly the issue of sales channels), and economy of scale (supplier relationships in manufacturing)." p100
Wilkinson, I & Kipnis, D	1978	Interfirm use of power	Journal of Applied Psychology	Social theory	Case studies	Firm/ organization	Power	Theoretical development	Skewed power balance render in skewed resource allocation. The powerful counterpart will take a greater share of available resources.	"The major finding of the present study was the use of strong and weak means of influence can be predicted from knowledge of the relative power of the contending organizations, the kinds of conflict between them and the amount of resistance that the target organization manifested." p 319
Wilkinson, I., Young, L.C., Welch, D & Welch, L	1998	Dancing to success: export groups as dance parties and the implications for network development	Journal of Business & Industrial Marketing	Network theory	Case studies, Comparable (case) analysis	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design, Trust	New empirical results	Firms need to be skilled in developing and managing network relations	"Our analysis examines the benefits of coordinated action and the development of networks and relations among people and firms in the group and with external agencies." p 503

Author (s)	Year	Name of article	Name of journal	Theoretical view	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
Wilson, F	1999	Cultural control within the virtual organization	The Sociological Review	Panopticom theory	Literature review/essay	Firm/organization, Network	Coordination	New practical results	Propose that panoptical quality systems are superior if leaders should be replaces with loose bounded virtual networks that focus rather on norms than control	Propose norms rather than rules	"In theory, the virtual organization is a network or loose coalition of manufacturing and administrative services using integrated computer and communications technologies to ling differing groups of personnel for a specific business purpose." p 675
Yoo, S.B	2002	Web-based knowledge management for sharing product data in virtual enterprises	International Journal of Production Economics	Communication theory	Case studies	Firm/organization	Communicate	Theoretical development	How share data in virtual organizations	Suggests an agent based approach	"In information technology, ontology is the working model of entities and interactions in some particular domain of knowledge or practices. I a broader sense, the metadata presented in the previous subsection can be included in ontology." p 176
Young, A. & Kielkiewicz-Young, A.	2001	Sustainable supply network management	Corporate Environmental Strategy	Network theory	Literature review/essay	Network	Flows/ Workflows		Describing characteristics and issues in sustainability supply networks		"For example, tools and strategies are very much linked to one another and reflect an organization's corporate culture." 263
Zaheer, A., McEvelly, B & Perone, V	1998	Does trust matter? Exploring the effects of interorganizational and interpersonal trust on performance	Organizational Science	Network theory	Survey, Hypothesis	Relation	Trust	Theoretical development, New empirical results	Does trust really matter to the organizational performance?		"Our results broadly support the thesis that trust in relational exchange influences negotiation processes and performance, although the precise nature of the link is somewhat different from what we initially proposed." p 153

Author (s)	Year	Name of article	Name of journal	Theoretical view	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Quotation
Zaheer, A., Venkatraman, N	1995	Rational governance as an inter-organizational strategy: An empirical test of the role of trust in economic change	Strategic Management Journal	Transaction cost theory	Survey, Hypothesis	Firm/ organization	Trust	Theoretical development	Model of relational governance based on trust.	"This paper builds on transaction cost reasoning and evaluates and emerging view that no economic factors, primarily embodied trust - which we term sociological in order to distinguish them from more traditional transaction cost determinants and are complementary to economic ones in the governance of exchange relationships" p 373-374
Zhou, Q & Besant, C.B	1999	Information management in production planning for a virtual enterprise	International Journal of Production Resources	Strategic Management theory	Briefcase	Network	Communication	New practical results	Architecture of virtual enterprises	"Obviously, the information management of a virtual enterprise will be much more complicated than current enterprises." p 209
Zhuge, H., Chen, J., Feng, Y & Shi, X	2002	A federation-agent workflow-simulation framework for virtual organization development	Information & Management	Communication theory	Simulation method	Relation	Communication	Theoretical development	Information systems in virtual organizations	"...virtual organizations have the following main characteristics: autonomous management, ...predefined tasks and management rules; active behavior...; intuitiveness...; adaptability..." p 326

To Protect and Attract: Firms Cooperating in Nature-based Tourism Destinations

Ossi Pesämaa

Email: ossi.pesmaa@telia.com
Luleå University of Technology
Home phone: +920-225397

Joseph F Hair Jr

Kennesaw State University
Email: jhair3@comcast.net
Home Phone: 678-797-9736
Home Fax: 678-797-9783
Mobile: 770-335-7962

Per Erik Eriksson

Email: pererik.eriksson@ltu.se
Luleå University of Technology
Phone: +920-493058

Abstract

This paper explores solutions to potential communication problems that arise from cooperation in nature based tourism (NBT) destinations. The questions posed in this paper are: “When is a local firm in an NBT destination likely to cooperate with other firms?” and “How can cooperation be facilitated among NBT firms?” The primary focus of our research, therefore, is how to facilitate cooperation in NBT destinations. To do so, we first review different risk elements by describing a simulated scenario in which two participants (NBT firms) confront a prisoner’s dilemma with different options – cooperation and competition. The outcome of that scenario demonstrates that cooperation is only rational when the benefits of cooperation are greater than those for competition. Such situations do not occur in single games involving the prisoner’s dilemma, but only in infinitely repeated games. Since cooperation may not be rational from a game theoretic perspective policy makers and the firms involved should work actively to increase the benefits of cooperation. We conclude that cooperation is best achieved by having activities coordinated either by a strong, aggressive company or a strategic hierarchical network. Our logic is that coordinating activities from one point will increase the likelihood that partners have the same information and thus minimize conflicts.

Introduction

Researchers generally observe new situations as problems that need be better described, solved and/or explained. The problem is often not consistent across all situations and therefore needs to be described fully to provide a better foundation for approaching the problem in the future. One example of this type of problem is

cooperation (Simonsen, 2006; Pesämaa & Hair, 2007) in nature based tourism (NBT) destinations.

NBT destinations are those that do not primarily offer man-made attractions (Huybers & Bennett, 2003) but unique cultures, rural countryside, nature and wilderness (Pan & Ryan, 2007). Within NBT destinations several activities need to be coordinated; for example, safaris, fishing, hunting, snowmobiling, skiing, canoeing, boating and other wilderness-related activities. In addition these types of activities promote tourism-related local products such as souvenirs, food, equipment and even second homes. In order for the destination to be competitive, the firms providing these products and services need to cooperate. Firms and their members often overlook the value of cooperation and believe that activity coordination is something they can handle. It appears firms find it difficult to admit they do not know how to deal with this and they need help. Many practitioners are not statistically trained or familiar with scenarios which could point out the likelihood of different consequences. Hence, cooperative situations are solved most often with help from their past experiences (e.g., rules of thumb) instead of through logical and calculative reasoning. Since many cooperative situations have a very high failure rate and these failures cause not just disappointed individuals but sometimes also great losses, tools for understanding and guiding behaviors in cooperative situations are needed.

Politicians and policymakers are increasingly deciding to invest substantial resources developing NBT destinations because they believe they are suitable alternatives to replace traditional industries that historically have had a great impact in many remote regions. Entry of tourism in such regions sometimes creates adverse feelings towards this new opportunity because attitudes and culture are still tied to past opportunities. As a result, the entry of tourism can split a small local community into two sides – for and against. The “for” side typically views tourism as an opportunity to create new jobs, particularly for young people, uphold a minimum service level, sell local products, complement other industries and increase the overall service level. In contrast, the “against” side implicitly or explicitly speaks of the social pollution that tourism creates (e.g., noisy guests), commercializing culture, selling our job market for a low price (i.e., tourism is labor intense and low priced), and opening up our natural rights (i.e., fishing, hunting, boating and snowmobiling) to strangers.

Previous research has shown that developing NBT destinations typically causes problems because of multiple conflicting goals (Olson, 1965; Hardin, 1968; Piga, 2003; Clemmens & Douglas, 2006; Healy, 2006). These goals typically involve protecting the natural habitat and attracting and serving tourists at the same time. Their fundamental concern is to “*combine conservation and efficiency*” (Piga, 2003:889). Competing goals are managed to prevent the area from becoming overexploited and at the same time integrate commercialized tourism as part of local development. NBT attractions must therefore balance financial and social values. Firms not serving tourists typically are most interested in protecting while tourism firms are seeking profits. Tourism is often welcomed when suggested as a new local industry – until locals realize this development can challenge their traditions and culture. Competition over natural resources often exists. So the question arises as to “Who has the right to sell the community’s jewels to the guests?” Poor communication often causes these conflicts to be exaggerated.

Poor communication can lead to misunderstandings, hamper coordination and hold back social and formal influence. But effective communication leads to better information which in turn provides a clearer picture of what locals can expect. In turn, better information with clear explanations also helps locals to assess the inherent risks and thus prevent unexpected conflicts. We hypothesize that effective communications is the fundamental basis of the problem. We also argue that the rights and influence of many different interests must be coordinated and that the conflicting business strategies that almost always emerge can be visualized as “games.”

Planning communication between individual firms is very important to effectively develop NBT destinations (Piga, 2003). Game-theory is an analytical tool that can visualize the basis for communication and initiate discussions based on differing scenarios. It is therefore surprising that only one study in the past 20 years was found in a literature search of the Social Science Citation Index (SSCI) when ‘game theory’ was used in combination with ‘tourism’. Indeed, ‘nature-based tourism’ also has received little attention and a search of the SSCI on this topic resulted in only 52 studies. Piga (2003) examined a related issue, territorial planning, and suggested future research on the use of cooperative strategies for NBT destinations. Other studies such as Huybers & Bennet (2003), Clemmens and Douglas (2006) and Healy (2006) provide insights into ‘nature-based’ tourism and cooperation. This paper extends previous NBT studies on cooperation and at the same time applies game-theoretical principles to an infrequently studied area. The scenario is based on using cooperation as a planning approach for NBT destinations.

Our approach to studying NBT involves developing a prisoner’s dilemma that examines how two tourism firms’ evaluate the options of competition versus cooperation. The options and strategies were developed from Axelrod (1984). The scenario poses the questions: “When is a local firm in an NBT destination likely to cooperate with other firms?” and “How can cooperation be facilitated among NBT firms?” Based on potential reasons for and outcomes of this prisoner’s dilemma, our research generates insights for solving the problems faced by NBT firms.

A Tourism Prisoner’s Dilemma

Generally, prisoner’s dilemmas are used to clarify rules in situations involving conflicting goals (Axelrod, 1984). The prisoner’s dilemma thus specifies the assumptions for communication of consequences derived from different behaviors. For example, a simulated scenario could be devised of how relationships between tourism firms will develop in tourism. The scenario our research visualizes is a situation consisting of two simulated tourism firms’ solving a difficult opportunity – they must decide whether to compete or cooperate (see Matrix 1). Beyond the initial decision, they must repeat the decision-making scenario a second time. In a ‘real’ situation this means a tourism firm meets the other firm a second time and makes a new decision based on the same criteria as earlier. Matrix 1 reveals that both firms’ achieve a good return if both cooperate (R). The dilemma, however, is there is a small incentive to defect (not cooperate) because this will maximize the individual firm’s return (T). On the other hand if the firms do not cooperate and both defect (P), then both get a very small portion. Finally, if one firm trusts another firm that defects it incurs a substantial loss (S). This is why trust involves risk.

Matrix 1 Pay-offs of the PD Game

		Firm 2	
		Cooperate	Defect
Firm 1	Cooperate	$R_2 = 8$	$T_2 = 9$
	Defect	$R_1 = 8$	$S_1 = 1$
		Cooperate	$S_2 = 1$
		Defect	$T_1 = 9$
		Cooperate	$P_2 = 3$
		Defect	$P_1 = 3$

T = Temptation to not cooperate
R = Reward if both cooperate
P = Punishment if both stop cooperating
S = Pay-off for trusting a defecting partner

The assumptions are derived directly from a general requirement of a prisoner's dilemma where $T > R > P > S$ (Axelrod, 1984). The proposed scenario includes the element of survival, since $R > (T + S)/2$. In other words, if $R + R$ is larger than $T + S$ there is an incentive to cooperate, because switching the formula to $R < (T + S)/2$ would give incentives to defect (T) and also to forgive the other firm.

When tourism firms decide to compete or cooperate they must consider future goals and long-term benefits (Piga, 2003). They therefore develop a strategy for this decision which focuses on the outcome. Below are several factors that may effect the decisions of NBT firms.

- o How a decision affects their reputation (Clemmens & Douglas, 2006).
- o The type of firm they cooperate with (small or big) (Huybers and Bennett, 2003).
- o Earlier experiences they have had with a firm (Gulati, 1995).
- o How big this decision is in relation to future decisions (Axelrod, 1984).
- o Focusing on the outcome of the decision (Axelrod, 1984).
- o Shaking-up a situation by acting in an ethically questionable way (Axelrod, 1984).
- o Survival (Healy, 2006).

Any of the above factors can be a *reason* for pursuing a particular strategy. Moreover, all of the reasons can influence each other. For example, reputation can influence all other factors since many NBT firms operate in small local economies. In such small populations of players the probability for meeting again in future games is high, for which reason players do not want to be known as defectors (Axelrod, 1984). When NBT firms think of their reputations it does not matter how big or how small a situation is, reputation comes first. Especially smaller, newly-established firms must carefully judge a situation. If the firm defects it may wake up enemies. For example, a larger firm may control the situation and exclude firms from important events because they do not follow or behave according to local rules (Axelrod, 1984).

Firms in general prefer to work with other firms they share good experiences with and about which they feel confident (Gulati, 1995). Especially in NBT, firms often work closely in cooperative ideas that relate to their identity. Locals often like to fish or hunt, but may be less interested in sharing these activities with outsiders. Others may also like fishing, but are willing to work as guides to teach visitors how to fish. But

experiences can also be bad. Hunting, fishing or even snowmobiling and boating outside controlled areas can cause conflicts. These conflicts are inputs for new cooperative situations. Some conflicts regarding rights can end up being solved in publicly held trials, which may have negative effects on future cooperation.

If the business situation is complex, as it is with NBT destinations in remote areas, then cooperative efforts increase the likelihood NBT firms will survive (Kirchkamp, 2000). In general, NBT firms are very dependent on each other (Huybers & Bennett, 2003) and these dependencies have a large impact on the cooperative scenario. For example, if one cooperative partner closes their business, the other will likely also have to close. This is because tourists demand a variety of services, such as transfer to the destination, feeling safe if an accident happens when, for example, hiking or fishing, well trained guides, restaurants, shopping alternatives, baits for fishing, and related activities (Healy, 2006). NBT destinations' attractiveness is therefore based on appealing to many people with a large number of activities. Hence, the cooperating firms are dependent on each other to create an attractive destination.

Firms use different strategies, each of which involves risk. The different strategies also lead to different consequences (see Table 1).

**Table 1:
Behavior Orientation and Definition**

Behavior Orientation Strategy	Name	Definition	Study
Notorious Defector	ND	ND will always defect to ensure not being trapped by someone else's defection and/or to ensure a minimum gain.	Axelrod, 1984
Tit-for-Tat	TFT	TFT is a strategy in which actor with servile obedience follows the latest move of the partner.	Axelrod, 1984;
Mutant Strategy	MS	A powerful strategy can be MS, where the actor is exploring different ways of finding high payoffs through trial and error.	Axelrod, 1984
Notorious Cooperator	NC	Strong ties of kinship or cultures facilitate notorious cooperation through altruism or respecting common rules because of the risk of collective punishment.	Axelrod, 1984 Axelrod, 1997; Adler, 2001

The first strategy is notorious defection (ND). ND means the firm assumes a high risk in order to not be trapped if the other firm defects, but also accepts a minimum gain. The second strategy is Tit-for-Tat (TFT). TFT means the firm operates on a reciprocal basis. The consequences of a TFT strategy are the firm strictly follows the other firm in order to adapt to the prevailing situation. TFT is not a successful strategy if the discount

parameter¹ (w) is too small considering the current pay-offs. The cumulative value of an infinitely repeated mutual cooperation (R) will be $R/(1-w)$ and the value for an initial temptation to defect (T) followed by mutual defection (P) will be $T + wP/(1-w)$. If w are too small considering the current pay-offs, then $T + wP/(1-w)$ will be larger than $R/(1-w)$, in which case the players will choose to defect, given the belief that the other player is provokable. TFT is probably the most popular and most quoted strategy in game-theory.

"TIT FOR TAT's robust success is its combination of being nice, retaliatory, forgiving and clear. Its niceness prevents it from getting into unnecessary trouble. Its retaliation discourages the other side from persisting whenever defection is tried. Its forgiveness helps restore mutual cooperation. And its clarity makes it intelligible to the other actor, thereby eliciting long-term cooperation." (Axelrod, 1984:54)

Mutant strategy (MS) is a risky approach to finding a solution to the decision. But MS increases the chances for getting higher payoffs. After repeated games, an MS strategy always ends with defection. According to the principles MS strategy, firms defect from a cooperative situation to maximize pay-offs (T). MS strategy is especially effective if it is not possible to punish the behavior.

In some NBT destinations, behavior is conditioned by creating a strong safety net in which no firm will be negatively surprised. In such safe environments (Axelrod, 1997; Adler, 2001; Sally, 2001) altruism and other behavioral mechanisms prevent defection. Strong family ties and feelings for neighborhood structures result in notorious cooperation (NC). In such environments, unexpected defections result in quick collective punishment, such as discrediting the defecting firm's reputation. Moreover, they generally are led by a dominant firm (e.g., transportation companies) that actively works to limit such behavior (Axelrod, 1984).

Analyzing the cooperative situation

This section describes two different cooperative situations – a single cooperative situation and repeated cooperative situations (see Matrix 1 for the assumptions regarding pay-offs). As the PD in Matrix 1 reveals, the firm has two main decision options: to cooperate or to defect. When a rational participant analyzes which alternative to choose the attitude towards risk will affect the decision. For example, pessimistic low risk or optimistic high risk perspectives suggest different alternatives.

The first view is based on Wald's criterion, which focuses on exploring the outcomes from a pessimistic perspective. The pessimistic decision-maker is risk averse and avoids the worst outcomes by selecting the alternative that maximizes the minimum pay-off (maximin). Firms in this situation will choose to defect since $P > S$ in a PD ($3 > 1$ in Table 1).

The second view, Hurwicz' criterion, is a more optimistic and risky approach, with firms trying to achieve the highest possible outcome by maximizing the maximum pay-off (maximax). This type of firm will defect since $T > R$ in a PD ($9 > 8$ in Table 1).

¹ The discount parameter is a useful tool to subdivide the total value of the decisions. For instance, the weight of the second decision could be half as important as the first and the third half as important as the second. In this case, if using a discount parameter, it would be 0.5. The chain expressed in cumulative terms would give $1+w+w^2+w^3+\dots+w^n$ (Axelrod, 1984).

Consequently, the NBT firms playing the single game simulated in this paper will choose to defect, regardless of their attitudes towards risk.

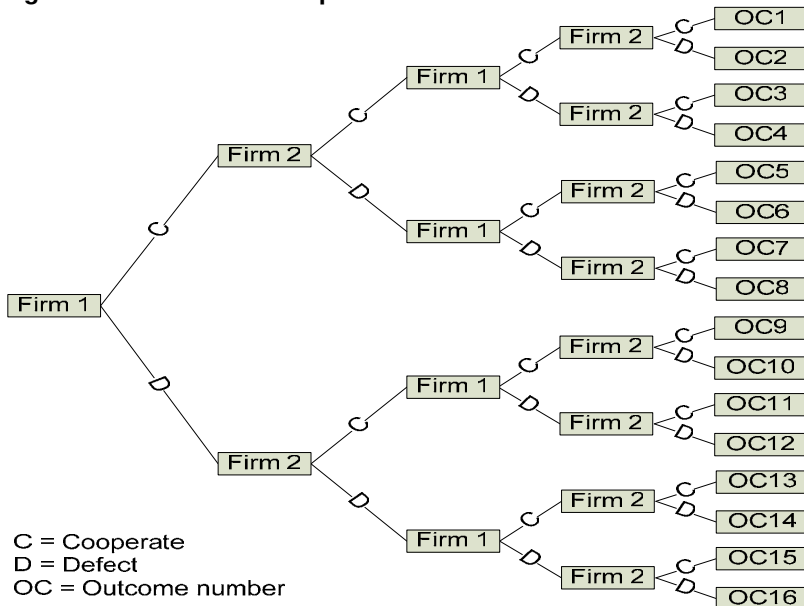
Table 2 Outcomes Analyzed in a Single Situation

	Lowest score Wald's criterion	Highest score Hurwicz' criterion
Cooperate	1	8
Defect	3	9

Analyzing the Repeated Game

The repeated cooperative situation is based on the assumptions in Matrix 1. The analysis reveals a specific kind of pattern in behavior and thus indicates the strategy a firm chooses. The pattern for each firm's decision-making can be followed in Figure 1, which also indicates that each decision has an outcome number (OC1-OC16) to be examined (Table 3).

Figure 1 Paths in the Proposed Decision Tree



Each outcome represents a strategy that focuses on the best outcomes to follow: (ND) notorious defector, tit-for-tat, trial and error (MS) or notorious cooperator (NC). The strategies are described in Table 3. Each behavior orientation is categorized based on the pattern the firm exhibits while making cooperative decisions.

Table 3 Categories of Strategy Selected for Each Actor in Two Games

Outcomes from simulation sequence	First Game		Second Game		Behavior Orientation	
	Firm 1	Firm 2	Firm 1	Firm 2	Strategy Firm 1	Strategy Firm 2
1	8	8	8	8	NC/ TFT/MS	NC/ TFT/MS
2	8	8	1	9	NC/ TFT/MS	MS
3	8	8	9	1	MS	NC/ TFT/MS
4	8	8	3	3	MS	MS
5	1	9	8	8	NC/MS	MS
6	1	9	1	9	NC	ND/MS
7	1	9	9	1	TFT/MS	MS
8	1	9	3	3	TFT/MS	ND/MS
9	9	1	8	8	MS	NC/MS
10	9	1	1	9	MS	TFT/MS
11	9	1	9	1	ND/MS	NC
12	9	1	3	3	ND/MS	TFT/MS
13	3	3	8	8	MS	MS
14	3	3	1	9	MS	ND/MS
15	3	3	9	1	ND/MS	MS
16	3	3	3	3	ND/MS	ND/MS

A comprehensive analysis is presented in Table 4. By examining the simulation, it is clear ND is the most successful strategy, regardless of the players' attitudes towards risk. Consequently, defection is the most rational behavior in both the single and the repeated cooperative situation.

Table 4 Analysis of Simulated Behavior Orientation in Two Games

	Min	Max	Wald Pessimistic view	Hurwicz Optimistic View
Notorious defector (ND)	6	18	6	18
Tit for Tat (TFT)	4	16	4	16
Mutant strategy (MS)	4	18	4	18
Notorious cooperator (NC)	2	16	2	16

Discussion

From a game theoretic perspective, we have shown that it is not rational for NBT firms to cooperate in the short run. Only in infinitely repeated games is cooperation rational (Axelrod, 1984). Nevertheless, complexity necessitates cooperation (Kirchkamp, 2000) and the survival and competitiveness of NBT destinations depends on cooperation among these firms. Hence, it is of crucial importance to facilitate cooperation through purposeful actions, which increases the justification for firms to look beyond individual short-term pay-offs and pursue the destination's long-term prosperity.

From a strict game theoretic perspective neither trust nor communication without possibilities of binding agreements influences the outcome of the game (Axelrod, 1984). Real world experiments have nevertheless indicated that cooperation is boosted by communication between players (Lazar, 2000). Furthermore, good communications foster trust (Morgan and Hunt, 1994) and empirical evidence shows that trust enhances cooperation (Parkhe, 1993, Morgan & Hunt, 1994, Lazar, 2000). In real life, long-term relationships foster trust, which leads to decreasing transaction costs (Eriksson, 2007). This will increase the profits of future projects, i.e., the shadow of the future (w) will become greater, which in turn supports cooperation in a repeated Prisoner's Dilemma. So, indirectly communication and trust do boost cooperation in inter-organizational relationships, according to game theoretic reasoning (Parkhe, 1993, Eriksson, 2007).

Hence, policy makers should facilitate and encourage tourism firms to communicate and share information. This can be achieved by continuous meetings where participants involved and affected by the development of the destination meet and discuss issues regarding cooperation as well as potential conflicts that have a significant impact on their survival. The ability to recognize defection is an important requirement for cooperation to emerge. If defection is not recognized, then provocation is impossible and without the threat of retaliation participants have no motive for a cooperative decision (Axelrod, 1984). A practical problem in recognizing defection in the real world compared with theoretical games is that the participants may have different opinions about what behavior is considered defection and what is considered cooperation. Therefore, before the start of the game it is important that participants discuss this so they agree about what is considered defection and what is not. This type of communication will thus enhance cooperation. Establishing an arena for such relationship discussions will also enhance a culture characterized by shared values. Earlier research within the area of tourism has shown that shared values are a more important basis for decreasing opportunism than ownership and relationship specific investments (Dev, et al., 2000).

We also propose that NBT destination policymakers should consider enabling professionals to control resources from a single point, through a hierarchical network or transportation company. This will ensure a focus on the most important objectives at the destination level and minimize conflicts.

Individual NBT firms also should pursue strategies that facilitate trust and cooperation, such as improving partner selection (Huang, 2006) and contract formalization. Careful selection of partners and well defined contracts increase information and help participating firms anticipate the situation. Careful selection could also involve pre-stages where both sides communicate issues relevant for cooperation and through these prevent misunderstandings. Formalizing contractual obligations may be especially important when projects are short term, involve substantial resources, and include a single decision in which one firm can achieve gains that are not evenhanded.

Conclusions

We believe firms in NBT tourism destinations should pursue a balance between protecting key resources and at the same time attracting tourists. This approach sometimes creates complicated cooperative situations in which firms must choose between cooperating versus applying a more opportunistic strategy. Cooperation is therefore not easy to achieve when firms behave rationally and focus strictly on

individual short-term outcomes. Our results provide insights for NBT firms by suggesting likely answers to the question: “When is a local firm in an NBT situation likely to cooperate with other firms?” The answers are derived from simulating a situation with a prisoner’s dilemma and examining the likely outcomes. Furthermore, we have elaborated on how cooperation among NBT firms can be facilitated, resulting in several suggestions for NBT firms and policy makers.

From a game theoretic perspective, it is not rational for NBT firms to cooperate in the short run. But since tourists going to NBT destinations demand a myriad of activities such as transfer to the destination, knowing that medical care is available if an accident happens when hiking or fishing, well trained guides, restaurants, shopping alternatives, fishing and bait, and many other services, cooperation among the firms is crucial. Therefore, we suggest several approaches that NBT firms and policy makers should consider to reduce risk and encourage cooperation, including:

- o Policy makers should enhance communication and a culture based on shared values by conducting regular meetings to discuss issues related to cooperation and conflicts.
- o Policy makers should enable professionals to control resources from a single point through hierarchical networks or transportation companies.
- o Policy makers should communicate the importance of cooperation among NBT firms in order to develop an attractive and competitive NBT destination.
- o Policy makers should enhance the development of long-term incremental benefits, which the individual NBT firms can obtain through mutual cooperation.
- o NBT firms should select their partners carefully in order to enhance trust and shared values.
- o NBT firms should formalize important obligations in contracts.

In summary, there is much policy work to do in developing solutions where NBT firms are both competing and cooperating. In their efforts to promote the overall destination, firms must cooperate successfully in spite of conflicting goals that include protecting and attracting. Coordination is therefore an important strategy. Lack of coordination runs the risk that one of the goals will gain power over the other, and that a single goal will be maximized while the other receives a 'distant' secondary focus. Hence, neither goal will be fully realized since the two often are at odds with each another. Conflicting goals are better coordinated from a single point (e.g., a formalized strategic hierarchical network) because this increases the likelihood that both goals will be accomplished more effectively than if the responsibilities are divided and a hierarchal network is not in place.

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When Collaboration is Difficult: The Impact of Dependencies and Lack of Suppliers on Small and Medium Sized Firms in a Remote Area

Ossi Pesämaa

Email: ossi.pesamaa@ltu.se
Luleå University of Technology
Home phone: +920-225397

Joseph F Hair Jr

Kennesaw State University
Dept. of Marketing
Email: jhair3@comcast.net
Home Phone: 678-797-9736
Home Fax: 678-797-9783
Mobile: 770-335-7962

Anna-Karin Jonsson Kvist

Luleå University of Technology
Email: Anna-Karin.Kvist@ltu.se
Phone: +920-492935

Abstract

To ensure their success, small and medium sized firms must collaborate. This study reports the perceptions of tourism firms in Eastern Norrbotten, Sweden regarding collaboration. The findings indicate a very low level of collaboration and a lack of understanding of the dependencies among tourism firms and the benefits of reciprocity.

Introduction

Small and medium sized tourism firms cannot by themselves provide tourists with all their needs. Smaller tourism firms are limited, therefore, to offering a small number of similar activities. For example, a hotel may also have a restaurant and a bar. But tourists also are seeking other things, such as natural or man-made attractions, good climate, and activities such as canal trips, safaris, and rentals of boats, snowmobiles, and cars. Most tourism firms are therefore dependent on other firms to satisfy all the needs of tourists.

To develop satisfied customers it is essential for tourism firms to be aware of tourist needs as well as fulfil those needs (Jonsson Kvist and Klefsjö, 2006). Activities tourists seek are related to the primary needs Maslow identified including hunger, protection, shelter and self-actualization. Typically these products relate to the following:

- housing to satisfy their shelter needs,
- food to reduce their hunger,
- a tourism agency to assist in coordinating their activities,
- public services such as roads, police, and hospitals to provide a sense of security,
- public and private transportation such as airports, harbours, bike and car rentals to satisfy transportation needs,
- souvenir boutiques tightly knitted together in networks that offer shopping experiences to fulfil recreational needs,
- bars, restaurants, discos and churches satisfying social needs,
- casinos and amusement parks satisfying the desire for excitement,
- sports events, markets, festivals, concerts, theatres and religious events offering recreational needs,
- conferences, meetings and business affairs for business needs, and
- assistance from guides to understand the unfamiliar environment.

Considering the above diversity of needs, it is clear that tourism firms are dependent on multiple stakeholders. If another firm cannot supply even one of these needs tourism firms find themselves in a very difficult position.

Porter (1998) emphasized that location is central in establishing the quality of the product in tourism, which creates interdependencies between related or unrelated firms in an industry. He said:

“A visitor’s experience depends not only on the appeal of the primary attraction but also on the quality and efficiency of complementary businesses such as hotels, restaurants, shopping outlets, and transportation facilities. Because members of the cluster are mutually dependent, good performance by one can boost the success of the other” (Porter, 1998:81)

Other researchers have emphasized the need for firms in tourism destinations to collaborate (Judd, 1995). The purpose of this paper is to report the empirical findings of a study of dependencies, collaboration and reciprocity among tourism firms in Eastern Norrbotten, Sweden.

Background

Location is an important consideration for many tourism firms (Baum och Haverman, 1997). In examining location, tourism firms consider not only the demand for their products, but also the availability of related products. As a strategic operating factor, location can therefore determine whether a firm will be successful or not (Leventhal och March, 1993).

Firms located in remote regions typically operate under difficult circumstances. For example, remote geographical regions may exhibit negative attitudes, a poor local market, underdeveloped resources, lack of institutional support or a critical mass, and few entrepreneurs willing to take on risk when facing such challenges (Pesämaa and Hair, 2007). The presence of even one of these challenges can make it difficult for a firm. These circumstances often make the firms feel abandoned and alone in their attempts to overcome the challenges. Some difficulties are culturally conditioned and therefore relatively uncontrollable while others are related to management competencies. The uncontrollable difficulties may in fact prevent a firm from dealing with other more controllable challenges to the company. Indeed, the difficulties often are so demanding they cannot be solved independently.

Business operations also are affected by the local social structure (Axelrod, 1984). Well-utilized social structures can be very beneficial for businesses and open doors that otherwise would not have been opened. But many firms do not get the most out of their relationships (Vaananen, Buunk, Kivimäki, Pentti and Vaahtera, 2005). Instead, the firms react passively in their relationships not realizing cooperative strategies can enable them to respond quicker to changing circumstances (Harrigan, 1988).

A favorable social structure helps tourism firms because they are dependent on the cooperation of other tourism firms (Sherlock, 2002; Heuman, 2005). While tourism firms often compete for customers, they also collaborate at the destination level to serve customers (Von Friedrichs-Grängsjö, 2001). The local collaborative efforts and commitments require social skills that facilitate agreements to share goals and decisions that will attract more tourists.

Reciprocity includes several important aspects of cooperation and exchange. Reciprocity reflects how firms pursue their self interest in exchange relationships by balancing what they ‘give’ with what they potentially can ‘receive’. Reciprocity also can be the result of true altruistic concern for others or a friendship in which two partners are mutually attracted to work with each other (Sparrowe and Liden, 1997). Finally, reciprocity affects how well firms’ pursue different cooperative strategies (Axelrod, 1984; Harrigan, 1988). Reciprocity is therefore very important for tourism firms (Adams, 1992; Sherlock, 2002; Heuman, 2005).

Social skills imply tourism firms must ‘give’ and ‘take’ in different settings (Sparrowe and Liden, 1997). This rule of reciprocity is crucial to the success of tourism firms because otherwise they will have to function without the support of other firms (Portes, 1998). Operating alone is especially difficult in early development phases when support is needed most. The types of operational support needed by tourism firms differs depending on the situation, and firms without support may go out of business or be forced to relocate to areas where support is possible. Also, the local structure sometimes exhibits favoritism by supporting some firms and not others. For example, lack of social support may mean a favored firm receives the resources necessary to provide fishing or hunting opportunities for customers, while another does not. This type of negative social support prevents reciprocity in operations.

Portes (1998) argued that the social reciprocity of ‘give’ and ‘take’ is critical to the success of a local economy. A typical outcome of the lack of reciprocity is firms are reluctant to share ideas and contacts but still need other suppliers to provide resources for their business. Firms concerned that other firms’ are taking a free ride can also lose many opportunities (Ingram and Roberts, 2000). Reciprocity can therefore be very complicated, particularly in remote regions.

Lack of reciprocity can mean tourism firms get caught in a game of hide and seek. In such situations the tourism firm is less willing to share ideas but at the same time realizes ideas and resources are important for its success. Trust is also central for reciprocity in a local economy (Portes, 1998). In hide and seek the firm is

looking for other firms it can trust and share creative ideas with but is very careful about getting involved in sharing opportunities because it is afraid of negative outcomes.

Tourism firms often search for reciprocity opportunities but at the same time may be reluctant to share their own ideas. For example, tourism entrepreneurs may be afraid to provide technical consulting but also be dependent on others to give them advice on how to commercialize their ideas. Finally, firms may avoid bureaucratic systems but still be looking for stable institutions they can turn to for support. The result is tourism firms are caught in a social dilemma.

All of the preceding hide and seek examples show that firms are trying to balance different endeavors. Thus, when a firm is only 'giving' to the relationship it tends to promote frustrated participants because many firms are not getting anything in return (Vaananen, Buunk, Kivimaki, Pentti and Vaahtera, 2005).

Method

Hageback and Segerstedt (2004) previously studied collaboration in Eastern Norrbotten as an example of a remote location. Their study's definition of a remote location, referred to as a peripheral area, was a region separated by long distances with a small economic concentration per square kilometer. Specifically, remote areas had households located 200 meters from each other and fewer than five inhabitants per square kilometer. Our study meets these criteria. In Eastern Norrbotten there are 39,222 citizens living in four municipalities covering an area of 7,882 square kilometers, resulting in 4.98 persons per square kilometer. This work was used as a basis of selecting the geographic area for the current research.

A mail survey of tourism firms in Eastern Norrbotten was undertaken. No list of tourism firms in that area was available. But websites of the municipalities in the region listed a total of 103 tourism firms. The 103 firms were sent a questionnaire and 64 usable responses were received (62% response rate).

Measures

A survey instrument consisting of eight items was developed and pretested. The purpose of the first two questions was to evaluate reciprocity – the concept of give and take. The questions were related to: (1) How willing the firm is to offer advice to other tourism firms? and (2) How willing the firm is to accept external advice? The next three questions (3-5) were designed to obtain perceptions. They asked: (3) how the firm is perceived by tourists?, (4) how the firm is perceived by competitors?, and (5) how the Eastern Norrbotten region is perceived by potential tourists? Respondents answered the five questions using a 5-point Likert scale ranging from very negative = 1 to very positive = 5.

The last three questions were dichotomous (Yes-No) and obtained information on the current collaborative status. The questions asked: (6) Do you currently collaborate with any other tourism firms?; (7) Do you need other tourism firms to collaborate with?; and (8) Are there collaborating tourism firms that are crucial to your survival?

For analysis purposes the first two questions were treated as a reciprocity construct (Mavondo and Rodrigo, 2001). To justify this approach we first examined the correlation between the two items and found a significant, positive correlation (Q1 – 2 correlation = 0.50; $\alpha < 0.01$). This finding indicates tourism firms are receptive to 'give' and 'take', which is essential to reciprocity (Portes, 1998). Moreover, when combined into a single, summated scale the two items demonstrated acceptable reliability (0.67).

Results and Discussion

The results are presented based on questions 6 – 8. We first discuss the relationship of current collaboration activities (Q6), next need for collaboration (Q7), and finally whether collaboration is crucial to survival (Q8).

Table 1 shows the findings of those firms currently collaborating versus those not collaborating. A total of 18 of 64 firms (28%) collaborate with another tourism business. Thus, a relatively small percentage of the firms are currently collaborating with other firms. This suggests they may not understand the value of collaboration or they may fear collaboration.

The relationship between current collaboration and other issues was examined next. There was not a significant relationship between firms currently collaborating and their perceptions of how their firm is perceived either by tourists or competitors. There was, however, a significant positive relationship between firms currently collaborating and their feelings about how the Eastern Norrbotten region is perceived by potential tourists. That is, firms currently collaborating believe the Eastern Norrbotten region is perceived significantly more favorably by potential tourists than do firms not currently collaborating.

The relationship between current collaboration activities and reciprocity also was examined. The results revealed a significant positive relationship between firms currently collaborating and reciprocity. That is, firms currently collaborating are more willing to engage in activities involving give and take (reciprocity), including sharing of advice.

Table 1:
Current Collaboration and Other Issues

Question	Currently Collaborate	N	M	Min	Max	F	P
	How firm is perceived by tourists?	No	18	4.58	3	5	0.62
Yes		46	4.46	3	5		
Total		64	4.49	3	5		
How firm is perceived by competitors?	No	18	3.11	1	5	2.44	0.12
	Yes	46	3.46	1	5		
	Total	64	3.36	1	5		
How the Eastern Norrbotten region is perceived by potential tourists?	No	18	3.26	1	5	4.61	0.04
	Yes	46	3.87	1	5		
	Total	64	3.7	1	5		
Reciprocity (Q1-2)	No	18	3.62	2	5	6.29	0.01
	Yes	46	4.25	1	5		
	Total	64	4.07	1	5		

Note: N = number of firms; M = mean value; Min = lowest value; Max = highest value; F = f statistic; and P = probability level.

Table 2 compares the findings of firms that believe they need collaboration versus those that do not see the need. A total of 14 of 64 firms (22%) perceive a need to collaborate with another tourism business. Thus, an even smaller percentage of the firms perceive a need to collaborate with other firms. This provides further support that the firms likely do not understand the value of collaboration or may fear it.

Table 2:
Need for Collaboration and Other Issues

Question	Need Collaboration	N	M	Min	Max	F	P
	How firm is perceived by tourists?	No	50	4.5	3	5	0,2
Yes		14	4.4	3	5		
Total		64	4.5	3	5		
How firm is perceived by competitors?	No	50	3.3	1	5	1,3	0.27
	Yes	14	3.6	3	5		
	Total	64	3.4	1	5		
How the Eastern Norrbotten region is perceived by potential tourists?	No	50	3.8	1	5	0,6	0.43
	Yes	14	3.5	1	5		
	Total	64	3.7	1	5		
Reciprocity (Q1-2)	No	50	4	1	5	3,1	0.08
	Yes	14	4.5	3	5		
	Total	64	4.1	1	5		

Note: N = number of firms; M = mean value; Min = lowest value; Max = highest value; F = f statistic; and P = probability level.

Perceptions and reciprocity issues also were examined. There were no significant differences in perceptions and whether a firm believes collaboration with other firms is necessary. There was, however, a significant relationship between a perceived need for collaboration and reciprocity. That is, firms that see a need for collaboration also are more willing to engage in activities involving reciprocity. This suggests they perceive the benefits of reciprocity whereas other firms do not.

Table 3 compares the findings of firms that have other collaborating firms crucial to their survival versus those that do not. Only 6 of 64 firms (9%) report another collaborating tourism business is crucial to their survival. Thus, a very small percentage of the firms believe their survival is dependent on collaboration with other firms. This finding suggests a lack of perceived interdependency (Porter 1998) in Eastern Norrbotten. It also again shows tourism firms likely do not understand the value of collaboration or may fear it.

Table 3:
Collaboration Crucial to Survival and Other Issues

Question	Collaboration Is Crucial	N	M	Min	Max	F	P
How firm is perceived by tourists?	No	58	4.51	3	5	0.5	0.48
	Yes	6	4.33	3	5		
	Total	64	4.49	3	5		
How firm is perceived by competitors?	No	58	3.33	1	5	1	0.33
	Yes	6	3.67	3	5		
	Total	64	3.36	1	5		
How the Eastern Norrbotten region is perceived by potential tourists?	No	58	3.72	1	5	0.2	0.63
	Yes	6	3.5	3	5		
	Total	64	3.7	1	5		
Reciprocity (Q1-2)	No	58	4.11	2	5	0.8	0.39
	Yes	6	3.75	1	5		
	Total	64	4.07	1	5		

Note: N = number of firms; M = mean value; Min = lowest value; Max = highest value; F = f statistic; and P = probability level.

Conclusions

Some firm operate in difficult conditions with many challenges. But tourism firms confronted with such challenges can grow and become strong by pursuing dependencies between firms (Porter, 1998; Von Friedrich Grängsjö, 2001). Our results indicate that to a large extent dependencies are not evident in a remote region such as Eastern Norrbotten.

Firms that see a need for collaboration are more favorable toward activities involving reciprocity. But they find this difficult to achieve because most other firms do not see the benefits of collaboration. Tourism firms in this and other remote regions likely could benefit from collaboration but apparently do not understand the implications of firm dependencies or the value of working with other firms through reciprocity.

Tourism firms are dependent on each other for their success. Previous research has demonstrated the value of collaboration (Pesämaa and Hair, 2007). The limited collaboration among firms in Eastern Norrbotten clearly demonstrates their lack of understanding of this dependency or that it can be overcome through collaboration. Future studies should examine how awareness of dependencies develops as well as how collaboration can be encouraged. Additionally, studies in Eastern Norrbotten should consider if firms in that area underestimate collaboration as this study has demonstrated.

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SECTION 7. PEOPLE IN THE HIERARCHICAL FIT

More than friendship is required: an empirical test of cooperative firm strategies

Ossi Pesämaa

*Department of Management, Luleå University of Technology,
Luleå, Sweden, and*

Joseph Franklin Hair Jr

*Department of Marketing, Coles College of Business,
Kennesaw State University, Kennesaw, Georgia, USA*

Abstract

Purpose – The purpose of this paper is to examine a proposed six-construct theoretical model of factors influencing successful cooperative relationships and strategy development.

Design/methodology/approach – A theoretical model of strategy development and cooperative relationships was tested. Qualitative research among key experts identified 15 successful regional tourism networks. Two successful cooperative networks were selected based on annual revenues. A sample of 254 small and medium-sized members were surveyed from the two networks in Northern Minnesota, USA.

Findings – Strong support was obtained for the proposed model. Hypothesized relationships were tested and the findings were consistent with previous research. Long-term orientation has a positive effect on friendship, loyalty, trust and commitment. Friendship is related to loyalty and commitment, and loyalty is related to trust. Ultimately, trust and commitment engender successful cooperation. The model can be used as a guide to strategy development at different levels in an organization.

Research limitations/implications – Large firms select between higher and lower order functional strategies. Small and medium-sized firms sometimes address commitment and cooperative strategies through shared goals and decisions in order pursue higher order strategies. This paper research supports a greater emphasis on establishing relationships using loyalty, trust and commitment to develop successful higher order strategies. However, relationships based on friendship also can be an important consideration in strategy development.

Practical implications – Strategic implications for developing relationships that can be used as a planning component of hierarchical strategies.

Originality/value – The paper maintains that loyalty is more important than friendship in developing successful strategies based on cooperation.

Keywords Corporate strategy, Strategic alliances, Trust, Channel relationships, United States of America

Paper type Research paper



Introduction

When they have a choice companies pursue a strategy of locating in regions where the likelihood of success is high (Park and Russo, 1996; Baum and Haveman, 1997). But a

large number of small and medium-sized companies are located in remote geographical regions where success is more difficult. These companies must choose strategies that enable them to compete more effectively. Cooperation has been proposed as one strategy likely to improve companies' competitiveness.

Being located in a remote geographical area makes it more difficult to compete. Relatively small local markets minimize the number of businesses with similar product strategies (e.g., two bakeries with the same pastry products). But when businesses are too dissimilar this hampers their ability to develop a strong shared strategy (too much difference eliminates the possibility of cluster proximity) and eliminates the possibility of long-term product development. This is frequently because lack of determination is widespread and negative attitudes discourage new ideas. Moreover, decisions often are based on underdeveloped resources with inadequate competencies, such as higher transportation costs or a smaller customer base, creating challenges to improving products or services and how they should be marketed. Operating under these challenges presents many problems for businesses, whether developing corporate, business or functional strategies. But, changing just one of the characteristics could stimulate the development of a more positive vision and innovative ideas, thus leading to a more successful hierarchy of strategies.

Formation of cooperative networks has been posed as one solution. Indeed, networks have been used as a strategy but often the networks have been unsuccessful. What can lead to success in networks between firms? One possibility is suggested by social exchange theory. This theory is applicable at different hierarchical levels, such as between individual firms, both large and small, as well as between networks of different firms' (Zaheer *et al.*, 1998; Bignonx, 2006). In this paper we propose and test a model of cooperation based on social exchange theory that could be used by firms to enhance their competitive position, and thereby more effectively coordinate corporate, business and functional strategies.

Theoretical framework

Social exchange theory suggests that when there is a long-term orientation (LTO), loyalty, trust and commitment can be the result of personal relationships, and that these relationships will engender cooperation and discourage opportunism (Blau, 1964, Zaheer *et al.*, 1998). Personal relationships are thus a consequence of individuals cooperating within an organization, or between groups or firms. Some researchers have challenged this theory (Levinthal and March, 1993; Edquist, 1997) by assuming a more rational selection of goals, locations, decision making, organization, market and administrative routines as major determinants of success (Rumelt *et al.*, 1991). Similarly, studies based on agency theory (Zajac, 1990), transaction cost economics (Williamson, 1981), resource differentiation (Teece *et al.*, 1997) and diversification of industry (Porter, 1980) assume accurate and unbiased selection which results in high performing firms. The embeddedness literature (Granovetter, 1985; Uzzi, 1997) merges these two fields by assuming that personal relationships such as friendship, loyalty, trust and commitment will diminish opportunism and encourage cooperation, limiting choices but positively effecting both personal and firm performance. The embeddedness view has therefore become a bridge between traditional sociological approaches (Blau, 1964) and the role of indirect relationships (e.g. friendship and other social activities) in establishing cooperation. Relationships between firms are thus a

rational selection entered into when they are beneficial for the firm and terminated when benefits are not evident.

Blau (1964) claims non-formal relationships, such as friendships, have a strong effect on the formal terms of contracts that regularize cooperation. He concludes an increased presence of inter-firm relationships results in consensus regarding assumptions about forming relationships. This consensus considers how individual relationships are formed as well as whether they have direct or indirect effects in establishing cooperation.

Relationships have been explored empirically in strategic management (Gulati, 1995) as well as in other fields such as marketing (Morgan and Hunt, 1994) and sociology (Rodriguez and Wilson, 2002). The studies have shown that cooperative relationships can emerge in situations involving competitor interactions (Ingram and Roberts, 2000), international exchanges (Mavondo and Rodrigo, 2001), business-to-business contacts (Morgan and Hunt, 1994; Gulati, 1995; Doz, 1996; Holm-Blankenburg *et al.*, 1996; Zaheer *et al.*, 1998; Mavondo and Rodrigo, 2001; Varamäki, 2001; Rodriguez and Wilson, 2002), buyer-seller dyads (Dwyer *et al.*, 1987; Garbarino and Johnson, 1999; Yilmaz and Hunt, 2001; Ekelund, 2002), online banking (Mukherjee and Nath, 2003), and supplier-to-supplier contacts (Nicholson *et al.*, 2001). These findings enable us to better understand the emergence and functioning of relationships leading to successful cooperation.

Social exchange theory illustrates how bonds between groups are initially formed and function over time. The theory suggests that friends, families and other groups are not considered organizations, but treated as valuable input in reaching goals (Rodriguez and Wilson, 2002). Moreover, value systems are never perfectly implemented because of the difficulty in determining an individual's values. Finally, bonds become an important part of an organization only after members begin sharing goals.

Literature on success assumes individuals are goal oriented (Edquist, 1997) and more so than others plan their time, tasks and relationships based on anticipated gains. Establishing relationships is a cost that can be calculated in money since it consumes time, effort and resources from other parts of the business. Relationships therefore may depend more on expected gains than on the type of bond. In business-to-business commitments these gains could be a shared understanding that operates daily or obligations that lead to future benefits. These obligations could lead to commitments in which replacing the partner is too expensive. In achieving cooperation, time is a relevant consideration since developing relationships requires a long period of time and may increase expenses in the relationship investment. The time requirement motivates individuals to consider other alternatives or situations likely to result in a positive experience (Gulati, 1995).

Cooperation is a skill that some individuals develop naturally. Others, however, find it difficult to understand the benefits of working together and may therefore not pursue cooperative relationships. In some situations cooperation appears very technical and personal relations are like inputs designed to gain a certain outputs. Moreover, cooperation can be conditioned by culture and some cultures are more inclined to establish long-term relationships (Nohria and Eccles, 1992). Yilmaz and Hunt (2001) used transaction costs and game theory to explain cooperation based on providing greater benefits than costs. In fact, cooperation diminishes the need to assess risks such as economic pitfalls (Axelrod, 1984) and personal issues (Blau, 1964).

Different perspectives necessitate different approaches to cope with associated risk. Blau (1964) believes cooperation is based on personal relations while Gulati (1995) argues that firms balance available choices in terms of their importance and that choices emerge from previous experiences. Hence, resources are required to maintain the current relationship or to develop another competing relationship.

This paper examines strategy development and cooperation between businesses. Strategies are chosen based on a LTO that pursues relationships through loyalty and friendship, enhanced by trust and commitment. Cooperation assumes relationships are strengthened by shared goals, decisions, understanding, flexibility in overcoming difficulties, and communicating to reduce difficulties. Mavondo and Rodrigo (2001) reinforce this view and include other propositions. First, individuals do not pursue cooperative relationships if there is no current or future value. Second, social skills are necessary to establish cooperation. Finally, as cooperation increases common goals are accepted and implemented. Thus, goals no longer predict the relationship itself, but how the relationship is likely to influence cooperation and ultimately strategy development across all levels of the firm.

The model in Figure 1 is an extension of Gulati (1995) and Morgan and Hunt (1994). It posits that in strategy development firms prefer an LTO to build personal relationships (friendships) and develop loyalty. Friendships and loyalty lead to trust and personal commitment, and ultimately have a positive effect on cooperation and the success of strategies. The constructs and their proposed relationships are discussed in the following paragraphs.

LTO

In developing strategies, successful cooperation hinges on a LTO based on positive experiences involving cooperation (Wetzels *et al.*, 1998; Gulati, 1995; Gulati and Gargiulo, 1999) and the belief that cooperation will lead to positive results (Axelrod, 1984). These realities reflect the fact that firms are not likely to pursue strategies based on relationships that offer few benefits. Thus expectations are based on positive experiences and anticipated future value.

Managers pursue long-term strategies even if no immediate benefits are promised because they believe it is important for the performance of their organization. This

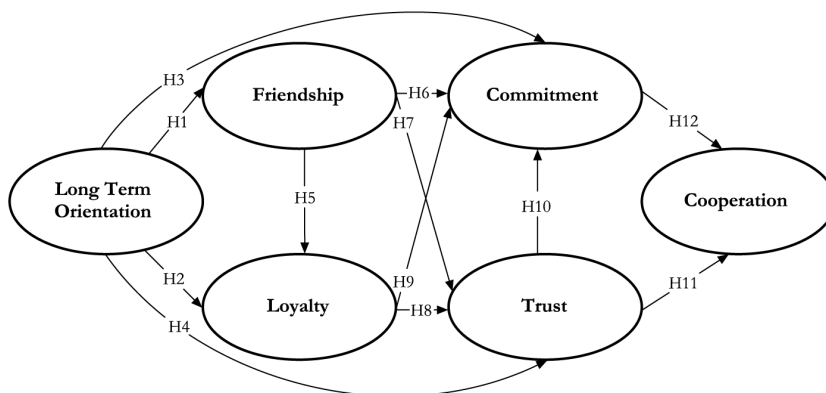


Figure 1.
Strategy model constructs
and hypotheses

perspective assumes managerial approaches are based on more than just daily contact and require time and effort to develop (Gundlach *et al.*, 1995; Wetzels *et al.*, 1998; Gounaris, 2005).

However, an LTO can have negative outcomes. For example, opportunities may be lost because of obligations to remain loyal. Furthermore loyalties can hamper creativity and encourage routine patterns because thinking outside the box challenges the fundamentals the relationship is based on. Contextual circumstances can discourage an LTO and lower trust (Gounaris, 2005) and the need to control all decisions makes the situation more difficult. The absence of an LTO becomes crucial in situations where firms pursue complicated tasks requiring more time. Even if there is an LTO management of the situation may be poor. Relationships involving high personal and collectivistic investments also demand maintenance. One consequence of long-term friendships is they produce more dependencies because one must consider the impact of loyalty. For example, pursuing actions without considering others' feelings typically terminates relationships (Ingram and Roberts, 2000) or discourages future sharing of common benefits.

Empirical evidence supports a relationship between LTO and commitment (Gulati, 1995). Moreover the frequency of interaction depends on the length of the relationship (Nicholson *et al.*, 2001) and repeated success leads to trust (Gulati, 1995). This explains the high cost to replace relationships developed over a long period of time.

Based on these findings, we propose the following four hypotheses:

- H1. LTO is related to friendship.
- H2. LTO is related to loyalty.
- H3. LTO is related to commitment.
- H4. LTO is related to trust.

Friendships

Personal relationships based on friendships are consequences of individuals, within or between firms, working together and sharing their leisure time. Friendships can stimulate good communication, increase loyalty, trust and commitment but discourage opportunism (Zaheer *et al.*, 1998). That is why relationships often are considered as important as the product or services a company sells. When customers choose products or services the qualities might be similar, but the organizational reputations different. Organizational reputation extends to operational levels where coordinating tasks through invisible friendships can be decisive in winning customers (Ingram and Roberts, 2000). As an example, when a customer first becomes aware of an invisible friendship network they might say "So this is how it works." Thus, relationships can be as important as product or service qualities.

Friendships, however, involve more than being aware of the other friends' feelings and the significance they have for the future development of the relationship (Mavondo and Rodrigo, 2001). Friendships, therefore, must be considered from a broader perspective. Being a friend does not necessarily include knowledge of what constitutes the friendship, because we may simply like each other. A consequence of developing friendships is that persons socialize outside work and therefore also have access to information and how decisions are made (Mavondo and Rodrigo, 2001). This access

directly affects the ability to talk openly as friends and to consider the partner's feelings before making an important decision.

Friendships recognize that when partners change friends are lost. Thus, a negative side is that friendships as in any relationship involve conflicts and disappointments. The negative side also includes situations where someone feels pressure when one person exerts control over another because of their stronger position. Clearly this influences relationship development and results in conflicts and disappointments. However, friendship also leads to positive situations such as better ideas and improved discussions. This bundled construct of friendship is important in examining cooperation as a strategy.

Cooperation between friends is effective in completing demanding tasks such as radical product change (Johannisson, 1990) and in coordination of sales activities (Ingram and Roberts, 2000). In fact, the lack of friendships results in poor access to resources and information (Maslyn and Uhl-Bien, 2001). If cooperation and information sharing is important to continuing the relationship, then loyalty, trust and commitment must be considered.

We propose the following hypotheses:

H5. Friendship is related to loyalty.

H6. Friendship is related to commitment.

H7. Friendship is related to trust.

Loyalty

Personal relationships are the outcome of individuals cooperating on goals and decisions in which friendships stimulate interpersonal communicative skills. Although friends are enthusiastic about other individuals' ambitions, loyalty protects relationships. Loyalty is more task-related in the sense that the situation or action in itself becomes more important. Therefore, loyalty in personal relationships increases trust and commitment (Uzzi, 1997) and discourages opportunism (Zaheer *et al.*, 1998). Companies develop strategies to create loyal customers and more successful companies have loyal employees. Replacing employees or customers may not be negative in the long run but can be risky and costly in a short run. Loyalties are always difficult, and being loyal is based on enjoying the relationship and the context in which it takes place (Gounaris, 2005). In practice, loyalty protects and gives security to current relationships. However, loyalties may also discourage change. Loyal individuals are faithful during winds of change and continuously attempt to improve their shared contexts through cooperation. Thus, cooperation enables individuals to "save face", avoid conflicts, and find mutually beneficial solutions.

Loyalty is therefore critical in the process of cooperation, especially in achieving trust and commitment. Loyalty means that during cooperation individuals avoid embarrassing situations or spontaneously confronting friends or partners, and try to minimize difficulties and find agreeable solutions to conflicts. Thus, solving conflicts and finding solutions is central to a loyalty. Tjosvold and Sun (2002) reported that loyalty deepens personal friendships based on trust and strengthens cooperative goals, thus avoiding dysfunctional conflicts. Similarly, Morgan and Hunt (1994) found that shared values are important in developing communication, trust and commitment, so that conflicts that do arise are resolved in a functional manner.

In light of these findings, we propose the following hypotheses:

H8. Loyalty is related to trust.

H9. Loyalty is related to commitment.

Trust

If commitment leads to giving up resources and operations, or sharing more decisions, then the risk must be controlled by assessing whether the other individuals in the relationship are trustworthy. Trust is based on inherently risky experiences involved in relationships (Mayer *et al.*, 1995) and operates to exclude risky situations that threaten or otherwise jeopardize competitive advantages. At a personal level trust enhances social control and facilitates reciprocity and empathy (Axelrod, 1984). Trust is therefore considered an experience of mutual honesty and confidence that includes few negative surprises and is established on the basis of similar values. The assumption of few negative surprises with trust results in a feeling of fairness when decisions are made on new goals and opportunities.

Positive experiences from working together in previous projects and frequent interactions engender trust (Powell, 1990; Gulati, 1995; Garbarino and Johnson, 1999). Thus, trust is based on loyalty and cooperation and takes a long time to develop with friendship as a precursor (Mavondo and Rodrigo, 2001). Trust is a key mediator to cooperation and directly effects both commitment and cooperation (Morgan and Hunt, 1994; Wetzels *et al.*, 1998; Garbarino and Johnson, 1999; Yilmaz and Hunt, 2001; Wong and Sohal, 2002). Other studies corroborate the importance of trust in achieving successful cooperation (Axelrod, 1984; Rousseau *et al.*, 1998; Wildeman, 1998; Varamäki, 2001).

Trust is a governing mechanism used to facilitate cooperation. It is achieved based on reliability, honesty, fairness, responsibility, helpfulness and confidence (Morgan and Hunt, 1994). Trust establishes a state of belief that the more mutual trust exists the less likely the relationship will result in undesirable actions, hence reducing risk. Trust is therefore a matter of experience, which often takes a long time to develop and when damaged is difficult to repair.

In light of these findings, we propose the following hypotheses:

H10. Trust is related to commitment.

H11. Trust is related to cooperation.

Commitment

Commitment is based on how loyal a person or persons are to a social unit (Gundlach *et al.*, 1995). Commitment means individuals intend to continue their relationships (Gundlach *et al.*, 1995). Future intentions are therefore central to this concept along with social or professional values. Commitment includes future intentions to exchange information and transactions on a professional level, as well as more shared decision making. Successful long-term relationships contain highly committed parties. Therefore, a major reason for failed cooperation is lack of commitment (Wildeman, 1998).

In light of these findings, we propose the following hypothesis:

H12. Commitment is related to cooperation.

Methodology

Unit of analysis

The unit of analysis must be considered in studies of relationships between firms in order to avoid organizational level conclusions being based on personal perspectives (Oliver and Ebers, 1998; Mavondo and Rodrigo, 2001). However, relationships between firms typically involve both the personal and organizational levels. Figure 2 shows how personal relationships are likely to effect business-to-business reputations as well as interpersonal and inter-organizational relationships (Zaheer *et al.*, 1998). The boundaries of the unit illustrate how firms often develop strategies. Relationship strategies are assumed to affect not just a single unit, but also the whole firm. Thus, simple tasks such as voicemail or e-mail often can influence overall business performance. Furthermore, personal relationships can directly affect firm performance. This study focused on relationships between individuals in firms that belong to a network and the consequences these relationships may have on company performance.

Questionnaire

The questionnaire included six multi-item constructs adapted from Mavondo and Rodrigo (2001), Morgan and Hunt (1994) and Ingram and Roberts (2000). The six constructs were: LTO, friendship, loyalty, commitment, trust and cooperation. The constructs were measured using a five-point Likert scale with the endpoints labeled 1 = unimportant and 5 = very important. The initial instrument was developed and pretested with knowledgeable experts. It was then further pretested on a sample representative of those who would ultimately complete the survey. Based on the pretests individual items were revised or deleted from the questionnaire. The final questionnaire consisted of 31 items representing the six constructs plus demographic questions. Respondents were asked to complete the questionnaire and return it in the pre-addressed, stamped envelope. Construct reliabilities based on Cronbach alpha exceeded the required standard of 0.7.

Sample

Questionnaires were given to 254 businesses in the northern part of the USA. The businesses represented a broad cross section of different types, including banks, restaurants, real estate companies, retailers, hotels, transportation, and related services. All were knowledgeable about cooperative networks based on several years of experience of either participating in or working with such organizations. A total of 99 completed questionnaires were returned, representing a 39 percent response rate.

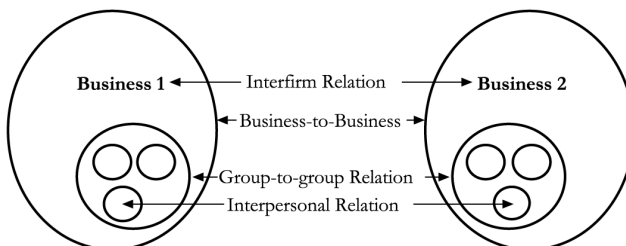


Figure 2.
Relationships and
organizational success

Results

An initial examination of the results was developed by calculating the means of the six constructs. The means were based on the summated scores of the individual items for each of the constructs. Table I presents the means for each of the constructs. The means illustrate that respondents perceive trust, cooperation, loyalty and long-term orientation as being the most important to the success of their businesses. This suggests that respondents believe pursuing cooperation through loyalty and trust is relatively more important than through friendships. To confirm this relationship, we examined the actual relationships between the constructs.

To test the relationships, including the proposed hypotheses, the data was further analyzed using structural equations modeling. The overall model demonstrated acceptable fit ($\chi^2 = 8.568$, $df = 3$, $p = 0.0036$, $\chi^2/df = 2.856$, $NFI = 0.965$, $IFI = 0.977$ and $CFI = 0.975$). Other than the Chi-square value, all of the goodness of fit measures met or exceeded recommended cutoff values. Individual items exhibited significant and substantial loadings on their intended construct indicating good convergent validity. Structural equations modeling enabled an examination of all relationships simultaneously instead of separately, as would have been true with path analysis.

Figure 3 shows the model and hypotheses. The hypotheses were examined by focusing on the size and significance levels of the path coefficients. The first four hypotheses relate to long-term orientation and its affect on four constructs – friendship, loyalty, commitment and trust. Results indicate that long-term orientation

Construct	Means
Long-term orientation	3.58
Friendship	2.94
Loyalty	3.65
Commitment	3.13
Trust	4.28
Cooperation	3.82

Table I.
Constructs and means

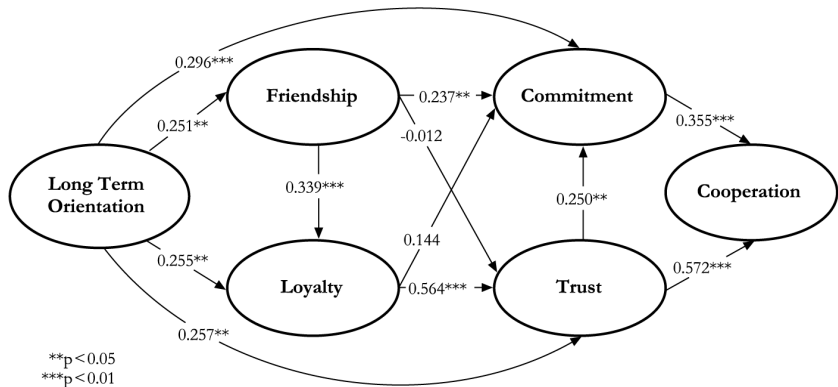


Figure 3.
Strategy model
relationships and findings

is positively and significantly related to both friendship ($H1$, $r = 0.251$; $p < 0.05$) and loyalty ($H2$, $r = 0.255$; $p < 0.05$). Similarly, LTO is a positive significant predictor of both commitment ($H3$, $r = 0.296$; $p < 0.01$) and trust ($H4$, $r = 0.257$; $p < 0.01$). Thus, the first four hypotheses are accepted.

The next three hypotheses relate to friendship. $H5$ and $H6$ are statistically significant showing that friendship is positively related to loyalty ($H5$, $r = 0.339$; $p < 0.01$) and to commitment ($H6$, $r = 0.237$; $p < 0.05$). In contrast, there is not a statistically significant relationship between friendship and trust ($H7$). Thus, are accepted, and $H7$ is rejected.

$H8$ and $H9$ relate to loyalty. $H8$ is statistically significant showing that loyalty is positively related to trust ($H8$, $r = 0.564$; $p < 0.01$). However, loyalty is not significantly related to commitment ($H9$). $H8$ is therefore accepted and $H9$ rejected.

The remaining three hypotheses examine trust and commitment. Trust is significantly and positively related to commitment ($H10$, $r = 0.250$; $p < 0.05$) as well as cooperation ($H11$, $r = 0.572$; $p < 0.01$). Moreover, there is a significant positive relationship between commitment and cooperation ($H12$, $r = 0.355$; $p < 0.01$). Therefore, $H10$, $H11$ and $H12$ are accepted.

Discussion

This paper proposed and tested a model of cooperative strategies among small and medium-sized companies. The model hypothesized that successful strategies based on cooperation (i.e. sharing strategic goals and decisions) begin with an LTO. The importance of a LTO was hypothesized based on previous studies. The studies conclude that both earlier experiences and future cooperative decisions are important to successful cooperation. Axelrod (1984) studied cooperation from an individual perspective based on the assumption that repeated cooperative actions, motivated by self-interest, must include improved outcomes for all. But the lack of shared goals in shared decision making will hamper the overall cooperative strategy. Gulati (1995) studied LTO based on shared experiences and demonstrated how earlier experiences enhance trust and eventually result in more future cooperation. This study found that LTO engenders cooperation via friendship, loyalty, trust and commitment.

Cooperative relationships involving friendship, loyalty and trust were examined by Ingram and Roberts (2000). They found that such relationships enhanced competitiveness by enabling firms to better serve their customers. Our results are similar in that they indicate friendships motivate individuals to consider the feelings of others before making decisions, thus leading to both loyalty and commitment. This suggests friendships play an important role in forming loyalty and commitment.

Ingram and Roberts (2000) also found that friendships facilitate trust and that relationships can be effective even if there are gaps in the network. However, they cautioned that friendships may also cause free-riding issues, which in turn affect trust. For example, friendships provide access to partners but if information is not shared this lowers trust resulting in reduced future benefits. Similarly, inappropriate use of information such as giving information to individuals outside the network will cause partners to question the benefits of the network. Our results indicate no relationship between friendship and trust. But there is a significant relationship between friendship and loyalty as well as friendship and commitment. This suggests friendships should focus on building loyalty and commitment more so than trust.

Previous research shows loyalty is related to cooperation when the relationship has perceived benefits (Holm-Blankenburg *et al.*, 1996). The current study found that loyalty is related to trust and ultimately to cooperation. Trust also is related to commitment, which involves social and professional values in addition to trust, and our study confirmed this. Our findings are consistent with Mavondo and Rodrigo (2001) and Nicholson *et al.* (2001), who found similar links between loyalty, trust and commitment. When loyalty leads to trust and commitment, partners are more likely to cooperate because it reduces risk.

Previous research has also shown that trust is related to commitment and cooperation and that commitment encourages cooperation (Morgan and Hunt, 1994; Mavondo and Rodrigo, 2001; Ekelund, 2002; Mukherjee and Nath, 2003). This study's findings are similar providing further evidence of the importance of relationships between loyalty, trust, commitment and ultimately cooperation.

Conclusions

Large firms select between higher and lower order functional strategies. Small and medium-sized firms sometimes address functional cooperative strategies through shared goals and decisions in order pursue higher order strategies. In an effort to be successful, small and medium-sized firms in remote areas developing shared competitive strategies should consider cooperative relationships as part of both business and functional strategies. This paper relies on social exchange theory advocating personal relationships based on trust (Blau, 1964; Rodriguez and Wilson, 2002). The findings support an embeddedness perspective suggesting rational decision making combined with personal relationships involving social aspects such as friendship, loyalty, commitment and trust can lead to successful strategies based on cooperation (Granovetter, 1985; Uzzi, 1997). The overall model demonstrates that given an LTO, strategy development should consider the role of loyalty, trust and cooperation in selecting partners.

Implications

This paper has demonstrated the importance of personal relationships and the role they can play in the success of strategies at all levels in the organization. Successful cooperation requires a long-term perspective as well as establishing friendships and building loyalty, trust and commitment. Furthermore, personal relationships can be as important as the transactional value provided. The emerging global economy stresses efficiency and effectiveness in technical and service qualities. But in strategy development cooperation among firms through better relationships is also important. Service-oriented industries have recognized the impact good relationships can have on reputation, including providing credibility for their services and products (Gounaris, 2005). However, product-oriented industries can also benefit through better planning and cooperation on R&D projects, new product development, market strategies, international exchanges, and local community development.

Limitations

The current study is based on a cross-sectional study. The proposed relationships are represented as sequential but "return loops" are also possible. For example, trust may lead to commitment, but commitment can enhance trust. Future studies of the proposed

relationships, both in terms of magnitude and direction, could benefit from a longitudinal study.

More than
friendship is
required

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Corresponding author

Ossi Pesämaa can be contacted at: ossi.pesamaa@ltu.se

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Modelling procurement effects on cooperation

PER ERIK ERIKSSON* and OSSI PESÄMAA

Luleå University of Technology, Business Administration and Social Sciences, Luleå, 971 87 Sweden

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Cooperative arrangements, such as partnering, have received increased interest in recent years. Several studies show however that cooperative relationships are not easily achieved in construction. Implementation of cooperative relationships requires changes in several elements of the traditional procurement procedures. The purpose of this paper is therefore to propose and test a sequential model regarding clients' cooperative procurement procedures. We especially ask: what elements in clients' procurement procedures facilitate the establishment of cooperation and trust in their relationships with contractors? The model was tested through structural equation modelling. The empirical data required for the test were collected through a survey responded to by 87 Swedish professional construction clients. The empirical results show that cooperative procurement procedures are triggered by clients' wish to involve contractors early in specification, which has a simultaneous effect on procedures regarding bid invitation and compensation. Furthermore, these simultaneous effects breed a certain kind of partner selection based on task-related attributes, which also has a direct positive effect on trust and above all on cooperation in client–contractor relationships. Besides these implications from the model, the improvement of measurements for future modelling is discussed.

Keywords: Cooperation, partnering, procurement, SEM

Introduction

In recent years increased interest in cooperative arrangements, such as partnering, has been noticeable in the construction industry as a result of escalating conflicts and adversarial client–contractor relationships (Bresnen and Marshall, 2000; Ng *et al.*, 2002; Chan *et al.*, 2003). The increased need for cooperation also stems from the increased complexity, uncertainty and time pressure that characterize construction projects (Gidado, 1996; Pietroforte, 1997). These characteristics require relation-specific investments, knowledge sharing, flexibility and integration, which are facilitated in long-term cooperative relationships (Pietroforte, 1997; Rahman and Kumaraswamy, 2002). Partnering, aiming at increasing cooperation and integration between the involved actors by building trust and commitment and decreasing disputes, can bring about advantages regarding quality, safety performance, sustainability, dispute resolution, human resource management, innovation, and also time and cost reductions (Barlow *et al.*, 1997; Egan, 1998; Chan

et al., 2003). Implementing cooperative relationships is however not an easy and straightforward task (Saad *et al.*, 2002; Chan *et al.*, 2003); it should therefore be done in a proper way and for the proper reasons in suitable projects (Bresnen and Marshall, 2000; Ng *et al.*, 2002). In their empirical studies of the implementation of cooperation in construction supply chains, Akintoye *et al.* (2000) and Saad *et al.* (2002) found that cooperation was conceived to be important and beneficial. However, they also found that a lack of understanding of the concept and its prerequisites hindered successful implementation.

Procurement determines responsibilities and authorities in the construction process (Love *et al.*, 1998) and affects the degree of cooperation and integration between the participants (Briscoe *et al.*, 2004). To facilitate cooperative relationships many elements of the traditional procurement procedures thus need to be changed. With this in mind, it seems relevant to increase the understanding of partnering implementation through cooperative procurement procedures (i.e. procurement procedures that facilitate cooperation). The purpose of this paper is therefore to propose and test a sequential model of clients' cooperative

*Author for correspondence. E-mail: pererik.eriksson@ltu.se

procurement procedures. We especially ask: what elements in clients' procurement procedures facilitate the establishment of cooperation and trust in their relationships with contractors? The model is tested through a structural equation modelling technique, based on empirical survey data from 87 Swedish professional construction clients. Apart from this unique empirical dataset, the paper offers (1) a model of how cooperation is formed through clients' procurement procedures; (2) how individual measures are linked to one another; and (3) a report on how well the individual measurements work in the context of construction.

Cooperative procurement procedures

According to Korczynski (1996), there are two main ways for the client side (including management contractors) to manage the relationships with construction actors: the competitive low-trust route and the cooperative high-trust route. These two routes start with the way of handling specification and affect the entire procurement process. The competitive route, which is traditional in construction (Kadefors, 2004), is based on a comprehensive and fixed design, seeking to gain short-term profits by passing on risks and pressuring contractors to lower their prices (Korczynski, 1996). Hence, this fixed design approach is mostly coupled with fixed price compensation. This traditional procurement paradigm receives criticism for hindering contractor input regarding planning and technical solutions, which hampers innovation and buildability (Korczynski, 1996; Dubois and Gadde, 2002). Furthermore, it makes parallel design and construction impossible, leading to longer project duration (Cheung *et al.*, 2001). Hence, it seems important that a new stream of cooperative procurement procedures emerges. Such a cooperative route seeks to obtain long-term gains through increased cooperation and integration of design and construction,

through early involvement of contractors (Korczynski, 1996).

We argue that complex, uncertain and more customized construction solutions require the procurement procedures to become more negotiable in nature (Bajari and Tadelis, 2001; Cheng and Li, 2002; Rahman and Kumaraswamy, 2002). Increased integration and cooperation between the actors through early involvement of contractors in specification is thus suitable in order to achieve efficient and value-adding solutions (Korczynski, 1996; Barlow *et al.*, 1997; Briscoe *et al.*, 2004). Such integration of design and construction affects procurement procedures and cooperation throughout the entire project. This is because it becomes important to establish a trust-based cooperative relationship in order to facilitate contractors' contributions in the design stage (Korczynski, 1996). Cooperative procurement procedures therefore demand a different kind of approach, involving more joint specification together with incentive-based compensation (Bajari and Tadelis, 2001; Love *et al.*, 2004) and limited invitation of contractors that are able to meet and fulfil certain task-related attributes (Geringer, 1991; Love *et al.*, 2004). All of these procurement elements are assumed to increase trust and cooperation in inter-organizational relationships (Korczynski, 1996; Bayliss *et al.*, 2004; Eriksson, 2006). In our depicted model (see Figure 1), we therefore propose that clients' desire to involve contractors early in specification affects their choices regarding compensation, bid invitation and task attributes, which further facilitates trust and cooperation. In order to develop and test this model, individual hypotheses connecting the different elements of the overall process are required. Below, these hypotheses are briefly discussed.

Specification effects on compensation and bid invitation

Fixed price compensation is well suited to fixed and comprehensive design (Bajari and Tadelis, 2001).

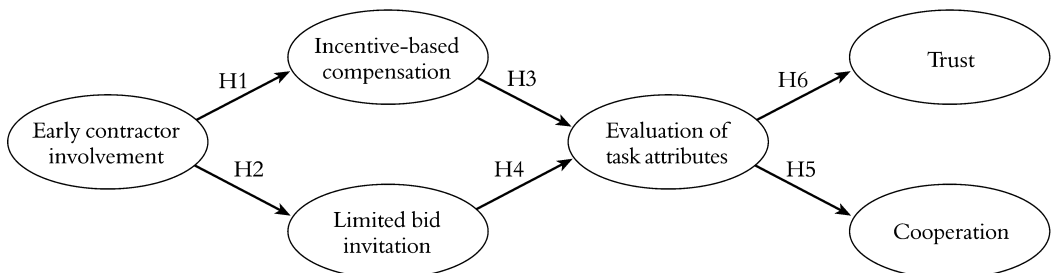


Figure 1 The model: cooperative procurement procedures

However, this approach may cause win-lose profit protection attitudes, which inhibit flexibility (Ng *et al.*, 2002) and discourage value-adding solutions. An alternative approach is early involvement of contractors in which the actors jointly specify both contract and construction-related activities (Korczyński, 1996). This early involvement is an effect of the many complex and uncertain processes clients perceive in the beginning of a new construction process. Since joint specification requires a lot of time and effort, it is often coupled with some kind of cost-plus (reimbursement) compensation (Bajari and Tadelis, 2001), which is motivation for the activity to be prioritized. Reimbursement contracts are occasionally coupled with cost incentives that reward (or penalize) contractors for having actual costs below (or above) a cost target (Bajari and Tadelis, 2001). Such incentive-based compensation is important in partnering arrangements so that all participating actors can reap the benefits of increased cooperation and integration between design and construction (Egan, 1998; Bayliss *et al.*, 2004; Love *et al.*, 2004).

Hypothesis 1: Early contractor involvement in specification has a significant effect on incentive-based compensation.

Additionally, joint specification requires close relationships and a long-term focus (Grandori, 1997), since relation-specific investments are needed (Williamson, 1985). Thus, specification is also related to bid invitation procedures. For cooperation to emerge, continuance is of the essence (Heide and John, 1990), which can only be obtained when the buyer utilizes a small pool of potential vendors who are regularly used as suppliers (Spekman, 1988). The constant replacement of actors between construction projects creates cost inefficiencies in the traditional competitive procurement route, since a new learning curve must be climbed by the supplier each time (Cox and Thompson, 1997) and because it discourages relation-specific investments. Love *et al.* (2004) therefore argue that when integration of design and construction is desired, contractors who have previously worked with the design participants should be selected. By using the same project team members, a partnering culture based on cooperation and teamwork can emerge (Love *et al.*, 2004). In order to enhance a long-term perspective on contractors' involvement and contributions in joint specification, professional clients should therefore utilize a small number of suppliers contracted on a regular basis, which is facilitated by limited bid invitations (Eriksson, 2006).

Hypothesis 2: Early contractor involvement in specification has a significant effect on limited bid invitation.

Compensation and invitation effects on task-related attributes

When purchasing standard products based on price, the client does not take the opportunity to influence the characteristics of the supplier, since these are considered less important (Heide and John, 1990). Such price-based bid evaluation coupled with fixed price compensation is traditional in construction. However, when incentive-based compensation is chosen, in order to motivate the contractor to contribute to value-adding design solutions, the initial bid price is of less importance than the characteristics of the contractor. Cooperative procurement procedures therefore contain an element in which the client evaluates the contractor's ability to perform crucial tasks. Such an evaluation of what Geringer (1991) calls task-related attributes is a complex and time-consuming effort. It requires a broad base of information ranging from earlier experiences, quality and environmental management systems, financial record, a change of attitude, references, cooperative and technical skills (Spekman, 1988; Parkhe, 1998). When clients initiate relational contracting, involving joint specification and incentive-based compensation, such a partner selection based on task-related attributes should be performed (Rahman and Kumaraswamy, 2002; Love *et al.*, 2004).

Hypothesis 3: Incentive-based compensation has a significant effect on task-related attributes.

When clients decide to invite a limited number of contractors to bid, they lose short-term price focus (Eriksson, 2006) and gain long-term benefits, by increasing the opportunities for continuous learning and relation-specific investments. Then it is important to ensure that contractors are trustworthy and able to contribute to better construction solutions (i.e. increased buildability), in order to reap the benefits from closer ties (Brown *et al.*, 2001; Love *et al.*, 2004). Thus, when only a few bidders are invited, it is important to perform a partner selection based on task-related attributes.

Hypothesis 4: Limited bid invitation has a significant effect on task-related attributes.

Task attributes' effects on trust and cooperation

A key aspect of cooperative relationships is joint actions that the partners perform together (Heide and John, 1990). In a construction context, establishment of joint objectives, team-building activities, shared information, shared office building and joint dispute resolution techniques are joint actions that are considered important aspects of partnering relationships (Barlow,

2000; Cheung *et al.*, 2003; Bayliss *et al.*, 2004). To facilitate this cooperation, the characteristics of the partners are of importance. Careful partner selection, based on task-related attributes, has therefore been found to set a proper basis for cooperation to emerge both in a general industry context (Heide and John, 1990; Stump and Heide, 1996) and in construction (Brown *et al.*, 2001).

Hypothesis 5: Task-related attributes have a significant effect on cooperation.

Another beneficial effect of evaluation of task-related attributes is trust, which is an important ingredient in partnering arrangements (Korczynski, 1996; Cheng and Li, 2002). Trust decreases the need for authority and control, since the parties instead can build a common organizational culture that encourages self-control (Aulakh *et al.*, 1996; Adler, 2001). When trust is present, transaction parties believe that they can get what they want from each other without the exercise of authority and control (Håkansson and Snehota, 1995). Hence, trust has the role of decreasing traditional monitoring and formal control that can create negative feelings for the entity and increase the propensity for opportunistic behaviour (Ghoshal and Moran, 1997). In cooperative relationships, the buyer should therefore trust the supplier to execute self-control of work in progress and finished work (Hagen and Choe, 1998). A key prerequisite for establishing this trust is knowledge about the partner and behaviour predictability, which is facilitated by careful partner selection based on task-related attributes (Parkhe, 1998; Das and Teng, 2001).

Hypothesis 6: Task-related attributes have a significant effect on trust.

Method

Sample

The data required for the test of our model was collected through a survey. The sample consists of the 104 members of an association called The Swedish Construction Client Forum, which has the objective of promoting the interests of construction clients in Sweden. The members are regional, national or international industrial and property companies, municipalities and regional authorities, and also government services and agencies, which procure construction work regarding civil engineering, housing, industrial facilities, etc. Hence, the Forum represents the majority of professional construction clients in Sweden. Registered contact persons in all of the member organizations were first approached by e-mail or telephone in order to ask

them if they or other more suitable persons were willing to participate in the study, on behalf of their organization. Hence, it was up to the contact person to choose the most suitable respondent, given that the survey involved procurement and project management processes. Only four people declined to participate at this stage, owing to lack of time, so a paper version of the survey was then sent out by mail to the 100 people that had agreed to participate. These people were mostly procurement managers, project managers or directors of the construction and facilities department in their organizations. After two reminders, a total of 87 responses were received, representing a response rate of 84% of the total sample size.

Measure: procurement procedures

The survey concerns different aspects of the organizations' procurement procedures. It was first piloted by five respondents, resulting in only minor changes. In the final version the respondents were asked how often they used different procurement procedures, measured by seven-point Likert scales (e.g. to what extent do you use reimbursement compensation including cost incentives? 1=very seldom and 7=very often). The exception to this is the question regarding task-related attributes in bid evaluation, in which the importance of the attributes was estimated (1=unimportant and 7=very important) in order to better assess their relative impact on bid evaluation results.

Multivariate analysis

The data were computed into the statistical package of social science (SPSS). For conducting structural equation modelling (SEM) we used an additional SPSS package called AMOS (analysis of moment structures). SEM is a multivariate technique used to estimate a series of interrelated dependent relationships simultaneously (Hair *et al.*, 1998). It has been applied in construction management contexts before, for example by Wong and Cheung (2005). They argue that it is appropriate when interrelationships of different hypotheses are investigated in a holistic manner, such as in the modelling of how different trust attributes affect partnering success (Wong and Cheung, 2005). Like these authors, we utilize SEM to produce an accurate representation of the overall results, which in our model means an investigation of how different elements of procurement procedures are interconnected and together facilitate the establishment of trust and cooperation (see Table 3). In this study SEM also provides a factor structure, giving information about how well each latent construct is reflected by the suggested items (Hair *et al.*, 1998) (see Table 2).

Results and analysis

In Table 1 we report the respondents' mean ratings (M) and standard deviations (SD) on items regarding early contractor involvement, incentive-based compensation, limited bid invitation, task-related attributes, cooperation and trust.

In order to investigate the suitability of the items measuring the constructs in Table 1, a factor analysis was conducted in AMOS. Table 2 reports the unstandardized and standardized factor estimates of each item. The factor scores prove that 18 out of 23 scores have an estimate that exceeds a 0.5 cut-off point. The measurement estimate on each latent construct is reported, since future studies may benefit from this information. The results suggest that the 18 items with satisfactory scores may be considered appropriate measures of their latent constructs, while the remaining

five items need to be further developed in future research. This is further discussed in the conclusions.

To investigate the relationships between the different constructs (Table 1) proposed in the model (Figure 1), a SEM analysis was conducted. The overall model receives only limited support if considering that IFI=0.8 (see Table 3). According to the rule of thumb, IFI should exceed 0.9 and in exploratory analysis a 0.8 level. More importantly, however, the most conservative criterion, chi-square divided by degrees of freedom, proves an almost perfect fit ($\chi^2/\text{d.f.}=3.50$), despite the relatively small sample size. As a rule of thumb, models having a $\chi^2/\text{d.f.}$ of more than five may be considered poor and less than two as over-fitted (Hair *et al.*, 1998). This means that the overall model of the proposed cooperative procurement procedures fits our data. Hence, it seems that clients involving contractors early in specification adopt a system perspective on their

Table 1 Descriptive summary of summated scales

Definition	Item	M	SD
<i>Early contractor involvement</i>	<i>To what extent specification is...</i>		
Integrated design and construction through early involvement of contractors in design-build contracts or joint specification	Specified by contractor (design-build contracts)	3.01	1.85
	Joint specification (client, consultants and contractors work together with design)	2.76	1.75
<i>Incentive-based compensation</i>	<i>To what extent contractors are compensated by...</i>		
Reimbursement compensation coupled with shared rewards (and risks) connected to a target price	Incentive-based reimbursement (A gain/pain sharing approach)	1.99	1.19
	Bonus-based reimbursement (A gain sharing approach)	1.67	1.2
<i>Limited bid invitation</i>	<i>To what extent bidding process is executed by...</i>		
A limited number of contractors are invited to bid	Slightly limited invitation (5-10 bidders)	3.64	2.32
	Strongly limited invitation (2-4 bidders)	3.09	2.24
	Direct negotiation (only one bidder)	1.98	1.36
<i>Task-related attributes</i>	<i>Importance of task related attributes</i>		
Partner selection through careful assessment of contractors' task-related attributes in bid evaluation	Earlier experiences of contractor	4.81	1.74
	Contractor's quality and environmental management systems	4.24	1.43
	Contractor's project staff and labour	5.14	1.49
	Contractor's financial record	4.67	1.39
	Contractor's attitudes towards change	4.54	1.76
	Contractor's references	4.80	1.59
	Contractor's cooperative skills	5.08	1.82
	Contractor's technical skills	5.46	1.53
<i>Cooperation</i>	<i>To what extent do the following parts of cooperation occur</i>		
Cooperation is based on sharing goals, information, operations and interpersonal teambuilding	Joint objectives	3.29	1.96
	Policy for conflict solution	1.90	1.18
	Shared information in shared IT-database	3.01	1.98
	Shared coordination office to operate from	1.99	1.37
	Teambuilding activities	3.25	2.01
<i>Trust</i>	<i>To what extent monitoring of performance is ...</i>		
Client's trust in contractor's self-control	Process control by client (reversed code)	2.49	1.85
	Process control by contractor	4.44	2.2
	Limited random output control by client	2.56	1.75

Table 2 Factor analysis measurements

Item	Estimate (Standardized)							P
	Early inv	Inc comp	LBI	Task attr	Coop	Trust		
<i>Early contractor involvement</i>								
Item 1	0.47 (0.32)							0.029
Item 2	1 (0.73)							N/A
<i>Incentive-based compensation</i>								
Item 1		1 (0.56)						N/A
Item 2		1.73 (0.97)						0.003
<i>Limited bid invitation (LBI)</i>								
Item 1			0.73 (0.47)					0.000
Item 2			1 (0.68)					N/A
Item 3			0.66 (0.73)					0.000
<i>Task-related attributes</i>								
Item 1				1 (0.56)				N/A
Item 2				0.85 (0.58)				0.000
Item 3				1.08 (0.71)				0.000
Item 4				0.74 (0.52)				0.000
Item 5				1.28 (0.70)				0.000
Item 6				1.17 (0.72)				0.000
Item 7				1.61 (0.86)				0.000
Item 8				1.21 (0.77)				0.000
<i>Cooperation</i>								
Item 1					1 (0.70)			N/A
Item 2					0.59 (0.69)			0.000
Item 3					0.67 (0.46)			0.000
Item 4					0.48 (0.48)			0.000
Item 5					1.02 (0.70)			0.000
<i>Trust</i>								
Item 1						1.07 (0.75)		0.004
Item 2						1 (0.59)		N/A
Item 3						0.49 (0.36)		0.014

procurement procedures, adapting them in their entirety to facilitate more cooperative relationships. This result is quite different from earlier research. Cheung *et al.* (2001) argue that there is a need for a more objective and systematic selection model, since construction procurement decisions are often judgmental and subject to biases of the decision maker. Our results, on the contrary, show that such a model

regarding a systematic view on cooperative procurement procedures is evident.

The individual hypotheses in the model also show some interesting results if focusing on the standardized estimates (presented in brackets) and level of significance ($p < 0.05$) (see Table 3). Unexpectedly, early contractor involvement in specification does not have a significant positive effect (+0.48) on incentive-based

Table 3 Test of model and hypotheses

Item	Estimate (Standardized)							Decision confirmed if $p < 0.05$
	Prop. Effect	Inc Comp	LBI	Task attr	Coop	Trust	p	
H1 Early inv	+	0.25 (48)					0.088	Rejected
H2 Early inv	+		0.47 (0.40)				0.082	Rejected
H3 Inc Comp	+			0.495 (0.37)			0.010	Confirmed
H4 LBI	+			0.192 (0.32)			0.028	Confirmed
H5 Task attr	+				0.723 (0.491)		0.001	Confirmed
H6 Task attr	+					0.029 (0.02)	0.88	Rejected

Note: Model Fit: $\chi^2 = 885.861$, d.f. = 253, $p = 0.000$, IFI = 0.80, $\chi^2/d.f. = 3.501$.

compensation (Hypothesis 1), nor (+0.4) on limited bid invitation (Hypothesis 2). This may indicate that many clients still perform a traditional competitive approach entailing open bid procedures and fixed price compensation when involving contractors in specification. Since many of the respondents represent public clients, for whom limited bid invitations are restricted, the rejection of Hypothesis 2 is not a surprise. Fixed price compensation is however not stipulated by law, for which reason the rejection of Hypothesis 1 cannot be explained by such an argument. As anticipated, we found that both incentive-based compensation (Hypothesis 3) (+0.37) and limited bid invitation (Hypothesis 4) have significant positive effects on task-related partner attributes (+0.32). This indicates that clients' partner selection is highly dependent on their earlier choices regarding type of compensation and bid invitation. Desirable task-related partner attributes (Hypothesis 5) also have a strong positive significant effect on cooperation (0.491), as predicted. This is in line with earlier research, which has found that careful partner selection forms a proper basis for cooperation to emerge both in a general industry context (Heide and John, 1990; Stump and Heide, 1996) and in construction (Brown *et al.*, 2001). Unexpectedly, task-related attributes (Hypothesis 6) have only a weak and not significant positive effect on trust in contractor's self-control (+0.02). The rejection of Hypothesis 6 may be due to trust being harder and taking more time to establish than cooperation. It requires a cultural change, which may be facilitated by a widespread long-term use of cooperative procurement procedures. To summarize Table 3: the overall model was supported, the individual hypotheses Hypothesis 1, Hypothesis 2 and Hypothesis 6 were rejected, while Hypothesis 3, Hypothesis 4 and Hypothesis 5 were confirmed.

Conclusions

This paper offers three contributions that are important to consider in the context of construction procurement. The first conclusion considers the overall procurement process, which relates to the model and how the order of the procurement procedures is formed. The second contribution considers the isolated hypotheses in the model, regarding interconnections between individual procedures. Finally, we discuss the measurements and how future research may benefit from them.

Starting with the overall model, it confirms that clients' desire to involve contractors in specification triggers them to perform cooperative procurement procedures. We can now verify that clients are bound by the chosen specification procedure in their

subsequent decisions regarding compensation, bid invitation and partner selection, in order to facilitate trust and cooperation with contractors. This systematic view on procurement is quite different from earlier research results, which have found that construction procurement decisions are often judgmental and subject to biases of the decision-maker.

When looking at the individual hypotheses, we did not find any support for the first two hypotheses. Early involvement in specification and its relations to compensation and bid invitation were both insignificant, which may indicate that many clients still perform open bid procedures and fixed price compensation when involving contractors in specification. An additional contribution to the rejection of Hypothesis 1 and Hypothesis 2 is that the measure of early contractor involvement reports somewhat weak internal reliability (discussed below). On the positive side, we found support for the idea that partner selection based on task-related attributes is positively influenced by both incentive-based compensation and limited bid invitation, supporting Hypothesis 3 and Hypothesis 4. Furthermore, the model confirms that clients performing such a partner selection are more likely to establish cooperation than trust in their relationships with contractors, supporting Hypothesis 5 but rejecting Hypothesis 6. Hence, it confirms that the extent of cooperation is highly dependent on a partner selection based on task-related attributes, which is in line with earlier research. The rejection of Hypothesis 6 may be because the establishment of trust requires not only a short-term change of procurement procedures in a specific project but also a long-term cultural change.

Finally, we reported that 18 out of 23 items proved a satisfying loading to their constructs regarding compensation, invitation, task attributes and cooperation, despite the relatively small sample size. We believe it is important to report also the weak results in order to develop better future instruments. Starting with the specification construct, which is mediated by the others, it plays an important role in how cooperation is formed in the construction industry. As aforementioned, the construct in itself reports weak internal reliability if focusing on factor estimates, and additionally it has a limited isolated effect on the subsequent constructs in the model (Hypothesis 1 and Hypothesis 2). Future research should thus focus on more details of the specification process (a better construct) or, given a larger sample, test if client, contractor or joint specification treated as different groups, have moderating effects on this kind of model. Next, the construct of trust in contractor's self-control may also benefit from a more fine-grained instrument consisting of a larger number of suitable items. Another interesting idea for future research would be to investigate the procured

parties' opinions regarding different procurement procedures' effects on cooperation. Since this study has a pure client perspective, we cannot compare their responses with those of the contractors.

Practical implications

The results imply that clients planning to implement cooperative relationships need to reassess their entire procurement process. Our model has verified that early involvement of contractors, limited bid invitation, incentive-based compensation and task-related attributes together affect trust and cooperation in client–contractor relationships. Therefore, partnering approaches based on only one or two of these procedures (e.g. incentive-based compensation) are not suitable. Furthermore, partnering initiated in the construction stage, based on the client's fixed design, may not be suitable since cooperative procurement procedures are triggered by clients' desire to integrate design and construction through early involvement of contractors in specification.

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Validating a Model of Procurement in the Construction Industry

Ossi Pesämaa

Email: ossi.pesamaa@itu.se
Luleå University of Technology
Home phone: +920-225397

Per Erik Eriksson

Email: pererik.eriksson@itu.se
Luleå University of Technology
Division of Business Administration and Management
Phone: +920-493058

Joseph F Hair Jr

Kennesaw State University
Dept. of Marketing
Email: jhair3@comcast.net
Home Phone: 678-797-9736
Home Fax: 678-797-9783
Mobile: 770-335-7962

Abstract

Management in the engineering and construction industry involves coordination of many companies and individuals, and is generally affected by complexity, differing conditions and uncertainty, which increase the need for cooperation. Appropriate procurement is crucial since it sets the basis for cooperation between those involved in completing construction projects. Our research poses the questions: Should cooperative relationships between clients and contractors be encouraged? If yes, what types of procurement procedures will enhance the development of cooperation in construction client-contractor relationships? We suggest answers to these questions based on an empirical study of a theoretical model of the relationships between contractors and clients. The model, based on four multi-item constructs that are tested on a sample of 87 members of an association called the Swedish Construction Client Forum, is strongly supported and exhibits content, nomological, convergent and discriminant validity. Our findings indicate that partner selection based on task related attributes significantly mediates the impact of two important pre-procurement processes (incentive-based compensation and limited bid invitation) on cooperation. The contribution of the paper involves improved measurement development as well as confirming a unique sequential order for achieving cooperation.

1. Introduction

Engineering is often considered the practice of inquiry leading to more knowledge and better routines that help solve and coordinate difficult tasks. Recently interest in

cooperation and coordination between participants has increased, particularly for engineering activities such as product development and manufacturing (Johansen et al., 2005; Mclvor et al., 2006). Coordinating construction projects is a traditional engineering activity involving many different elements and suppliers (Iwashita, 2001). In an effort to lower costs, increase quality and reduce risk, procurement management has become a key part of the planning and coordinating process. Detailed specifications are included in contractual documents, and records increasingly are being kept on suppliers that complete construction projects correctly and on time. Construction ranges from quickly manufactured standardized projects to large, complex and customized projects requiring high levels of coordination between many different components and suppliers. Suppliers, including plumbers, electricians, carpenters, painters and machine drivers, must work together to provide customized solutions within a short period of time. These suppliers meet many times during the actual building process to solve and adapt to emerging difficulties that cannot be planned for and covered in a contract *ex ante* due to, for example, uncertain ground conditions or changing client demands. Suppliers often have worked together in past projects, are simultaneously working together in parallel projects, and are likely to meet again in future projects.

The complex task of coordinating and managing the many suppliers and their activities is often performed by the general contractor (or construction management company). The client then has only a single point of responsibility to ensure that promises and contractual requirements are being met. Clients and general contractors are increasingly coordinating their activities, and often develop close cooperative relationships (typically referred to as partnering) with each other and share many experiences from project to project (Ngowi, 2007). Such partnering relationships improve coordination and flexibility, which is often beneficial in projects characterised by complexity and uncertainty (Larsson, 1995; Anvuur and Kumaraswamy, 2007). In such relationships clients frequently invite bidders selectively and sometimes offer incentive based compensation for projects completed correctly and on time. This initial pre-procurement phase later develops into a second phase where potential partners are assessed and selected based on their capabilities, and finally to a third stage where cooperation is involved.

This paper poses the questions: Should cooperative relationships between clients and contractors be encouraged? If yes, what types of procurement procedures will enhance the development of cooperation in construction client-contractor relationships? We suggest answers to these questions based on an empirical study of a theoretical model of the relationships between contractors and clients.

2. The Procurement Model

In the dyadic relationship between the client (buyer) and the contractor (seller), the contractor strives for high margins, timely payments, no complaints and a loyal client that is likely to do business with them again. In turn, the client wants value for their money, projects completed on time, quality products and no disputes. Both parties have in common that they want to serve partner's needs and motivate them to fulfill their obligations.

However, construction projects frequently suffer from disputes and conflicts (Molenaar et al., 2000). Thus, buyer-seller cooperation (Heide and John, 1990; Mclvor et

al., 2006) is more effective (Wong and Cheung, 2005) if better procurement procedures are implemented. To better understand procurement procedures, we examine a theoretical model which hypothesizes that relationships between both incentive-based compensation and limited invitation of contractors (Bajari and Tadelis, 2001) and ultimately cooperation, are mediated by partner selection based on task related attributes (Geringer, 1991). The model and hypotheses are shown in Figure 1.

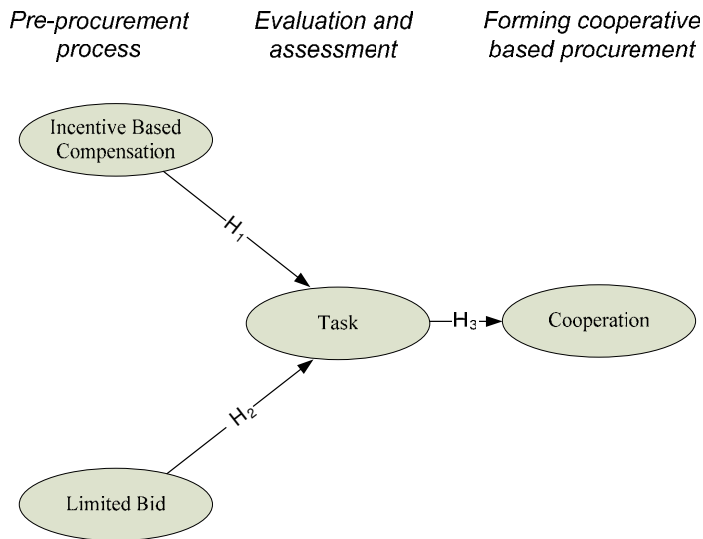


Figure 1 Theoretical Model of Proposed Relationships

2.1. Pre-procurement processes

The client's pre-procurement processes involve planning and preparing documents that describe client demands and requirements. Furthermore, the client has to decide the type of compensation before the documents can be sent out to bidders that are invited to prepare proposals. The contractors' bidding processes require a lot of time and effort, sometimes more than 500 working hours, without knowing if these efforts will lead to an order winning contract. After being invited to submit a proposal, the contractor coordinates specialists and partners that can contribute to a strong proposal. Some are very involved at this early stage, such as professional designers, architects and engineers. Clients are aware of these difficulties and therefore strive to develop pre-procurement processes that motivate contractors to develop strong proposals.

2.1.1. Limited Bid (LB)

One way to encourage strong bid proposals is to increase the chance for proposals to be successful by limiting the number of bidders. Limited-bid invitation is therefore a crucial pre-procurement mechanism for construction projects (Love et al., 2004). This mechanism makes partners feel special about being selected and may also enhance the feeling that work in developing a strong proposal will increase the likelihood of winning the contract. Recall also that the time invested may involve not just this project but others as well, thereby bringing a long term focus to the contracting and leading to opportunities to contribute in future projects. Limited bid, also called exclusive selection, is increasingly being relied upon among private sector clients, in order to enhance long-term cooperation.

2.1.2. Incentive based compensation (IBC)

To enhance high quality, timely and flexible product solutions in a complex and uncertain project environment, integration of design and construction (concurrent engineering) is required (Brown et al., 2001; McIvor et al., 2006). This in turn requires increased cooperation between the client, consultants, general contractor and suppliers. To increase the likelihood that partners enjoy the benefits (e.g, cost savings due to increased buildability) of increased cooperation and integration between design and construction (i.e. concurrent engineering), incentive-based compensation is an efficient procurement mechanism (Love et al., 1998; Brown et al., 2001).

2.2. Partner selection as a key mediator

Partner selection mediates the relationship between pre-procurement and cooperation and reinforces cooperation via a systematic selection process. Specifically, the independent constructs (i.e. pre-procurement variables) influence the intervening construct (i.e. task attributes in partner selection) and ultimately affect the dependent construct (i.e. cooperation). The intervening constructs, often referred to as mediators (Baron and Kenny, 1986) have an indirect effect on the outcome variable. Exploring the role of mediators is popular in structural equation modeling (Zvi, et al., 2006) and some articles have had a strong impact on their field (Morgan and Hunt, 1994).

2.2.1. Task attributes (Task)

Careful partner selection is important in developing interfirm relationships because it increases knowledge about potential partners. Some contractors may know what potential partners can perform, while others search for information to facilitate the understanding of potential partners' characteristics. In gathering information about partners, the focus is on attributes that are most important in selecting the best partners. Even when the information is favorable enough to enter into contracts, clients evaluating partners also must trust them. Task-related attributes have been recognized as providing a basis for cooperation to emerge both in general (Heide and John, 1990) as well as in construction projects involving concurrent engineering (Brown et al., 2001). Task

related attributes (Geringer, 1991) are thus important for firms in cooperative procurement processes in the construction industry. Relevant task related attributes include earlier experiences (i.e. references), interpersonal skills and technical competence.

2.3. Forming cooperation based procurement

Cooperation is important for firms in the construction industry (Iwashita 2001) and is the third stage in procurement activities. Cooperation based procurement instead of static price based contracts can increase flexibility for projects. This paper therefore hypothesizes that cooperation based procurement is crucial for construction projects characterized by complexity and uncertainty.

2.3.1. Cooperation (Coop)

The three activities of establishing joint objectives, performing team-building activities, and dispute resolution techniques are especially important for cooperation to emerge in a construction project context (Barlow, 2000; Anvuur and Kumaraswamy, 2007). Cooperation is the outcome variable of the proposed model, and is assumed to be influenced by task related attributes that mediate limited bid and incentive based compensation. We examine the following three hypotheses.

Hypothesis 1: Task related attributes mediate the effect of incentive based compensation on cooperation.

Hypothesis 2: Task related attributes mediate the effect of limited bid invitations on cooperation.

Hypothesis 3: Task related attributes have a direct effect on cooperation.

3. Method

3.1. Sample

Survey data was collected to test the model. The population consisted of 104 members of "The Swedish Construction Client Forum", an association that represents the majority of professional construction clients in Sweden and whose objective is promoting the interests of Swedish construction clients. The members are regional, national or international industrial and property companies, municipalities and regional authorities, and government services and agencies, which procure construction work involving civil engineering, housing, and industrial facilities. Registered contact persons in the member organizations were first approached by e-mail or telephone in order to ask them if they or other more suitable persons were willing to participate in the study, on behalf of their organization. The contact person thus selected the most representative respondent and the survey was sent by mail to the 100 individuals that agreed to participate (4 declined at

the initial stage). After two reminders, a total of 87 questionnaires were received, representing a response rate of 84 percent.

3.2. Measurements

The survey examined different aspects of the organization's procurement procedures. It was piloted to a small group of respondents resulting in minor changes. The final targeted respondents were asked how often they used different procurement procedures, measured using 7-point Likert scales (e.g., to what extent do you use different tools/ methods for increasing cooperation among those involved in the construction process? 1=Very seldom; 7=Very often). They also were asked the importance of various task-related attributes in bid evaluation (1 = unimportant and 7 = very important) to assess their relative impact on bid evaluation results. The constructs included the following number of indicator variables (see also appendix): Incentive based compensation (IBC) = 2 variables; Limited bid (LB) = 2 variables; Task related attributes (Task) = 4 variables; and Cooperation (Coop) = 3 variables.

4. Results and analyses

Traditionally, hierarchical regression and path analysis were used to measure relationships (Cohen, Cohen, West & Aiken 2002). Today many studies rely on structural equation models (SEM) that enable researchers to assess measurement characteristics of constructs as well as the existence of causal relationships (Bagozzi, 1980, and Hair et al, 2006). The modeling was divided into two steps – the first evaluated the reliability and validity of the constructs using confirmatory factor analysis (CFA) and the second examined the proposed theoretical relationships with SEM.

4.1. Descriptive results

The CFA measurement model including the 11 indicator variables is shown in Figure 2. Conditions for multivariate normality were met. Overall, two percent of the data was missing. Because inspection of the frequencies revealed no systematic differences for missing responses, the missing data were judged to be missing at random and maximum likelihood estimates were computed (Arbuckle, 2006). Moreover, prior to analyses a mean replacement procedure was used to deal with missing data (Hair et al, 2006).

To assess reliability and validity, standardized factor loadings, variance extracted, and the ratio of covariances to variance extracted were examined. All constructs met suggested reliability and construct validity guidelines (Hair, et al, 2006). Means (M) and standard deviations (SD) for each summated scale are shown in Table 1, as are the correlations and squared correlations (Table 2).

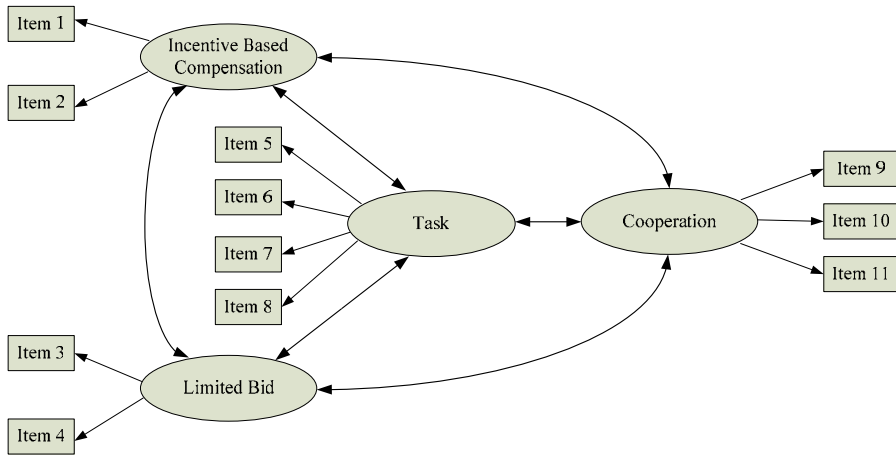


Figure 2 Measurement Model with Indicator Variables

Table 1 Descriptives and Correlations

	Mean	Standard Deviation	<i>Inter-correlations (IC), Construct Reliability and Squared Interconstruct Correlations (SIC)**</i>				Variance Extracted (VE)
			IBC	LB	Task	Coop	
IBC	1.83	1.05	.82	.49	.13	.14	64 %
LB	2.53	1.56	.12	.69	.13	.13	53 %
Task	5.00	1.38	.36*	.36*	.85	.23	58 %
Coop	2.81	1.41	.37*	.36*	.48***	.65	49 %

*p<.1; **p<.05; ***p<.01

**Note: IC on lower left side of matrix, construct reliabilities on diagonal, and SIC on upper right side of matrix (in bold).

Table 2
Confirmatory Factor Analysis Results

	IBC	LB	Task	Coop	P-value	Item Reliability	Error
Item 1	.54				N/A	.29	.71
Item 2	.99				.016	.98	.02
Item 3		.56			N/A	.31	.69
Item 4		.87			.025	.75	.25
Item 5			.70		.000	.49	.51
Item 6			.67		N/A	.45	.55
Item 7			.91		.000	.83	.17
Item 8			.75		.000	.57	.43
Item 9				.79	N/A	.63	.37
Item 10				.67	.000	.44	.56
Item 11				.64	.000	.41	.59

Table 3
Goodness of Fit – Confirmatory Factor Analysis

Measure	Measurement	Recommended value	This study
P	Statistical test of the model. χ^2 test of differences between estimated and actual covariance matrices.	Acceptable level $P > .01$	$P = .30$
Chi-Square/ Degrees of Freedom (d.f.)	Chi-Square in relation to degrees of freedom.	Recommended level lower than 5.	1.106
GFI	Goodness-of-fit Index	GFI acceptable $> .9$.925
CFI	Comparative Fit Index	CFI acceptable $> .9$.986
IFI	Incremental Fit Index	IFI acceptable $> .9$.987
RMSEA	Root Mean Square Error of Approximation	RMSEA acceptable $< .08$.035

4.2. Goodness of fit

Results of the goodness of fit measures support the proposed measurement model. The χ^2 and χ^2/DF ($p = .30$; $\chi^2/DF = 1.11$) indicated the hypothesized model should not be rejected (Hair et al, 2006). Three other indices of fit were examined: the comparative fit index (CFI), the incremental fit index (IFI), and the root-mean-square error of approximation (RMSEA). Examination of the CFI, IFI and RMSEA also demonstrated that the model was a good fit for the data (see Table 3).

4.3. Convergent, nomological and discriminant validity

Three types of measures were used to assess the reliability and validity of the model's constructs. Convergent validity is the extent to which the individual items in a construct share variance between them (Hair, et al, 2006). In our model all proposed constructs have standardized loadings estimates above the recommended .5 level, and variance extracted (VE) for constructs meets or exceeds 50 percent except for cooperation (49%) (see Table 1). Nomological validity examines whether the directions of the relationships are consistent with theory. Correlations are all positive indicating the results are consistent with theory, thus confirming nomological validity (see Table 1). Discriminant validity assesses whether the constructs are measuring different concepts (Hair, et al, 2006). The variance extracted (VE) is larger than the squared inter-correlations (SIC) between the constructs, which shows that the variance within the constructs is greater than that shared between the constructs. In two instances item reliabilities were lower than expected, but in the final model these items were retained based on content validity and model identification criteria. Thus, overall the criteria of content, convergent, nomological and discriminant validity were met, and the measurement aspects of the model indicate validity and reliability.

4.4. Test of sequential model and propositions

To examine the potential relationships, paths representing the relationships among the variables were tested using the AMOS7/SPSS statistical package (Arbuckle, 2006). The structural model is shown in Figure 1. Results indicate there is strong support for the model. Goodness of fit statistics ($\chi^2 - p = .202$; $\chi^2/DF = 1.18$; and GFI, CFI & IFI all above .9; RMSEA = .045) changed very little from the CFA model tested, and again indicate the model is a good fit for the data.

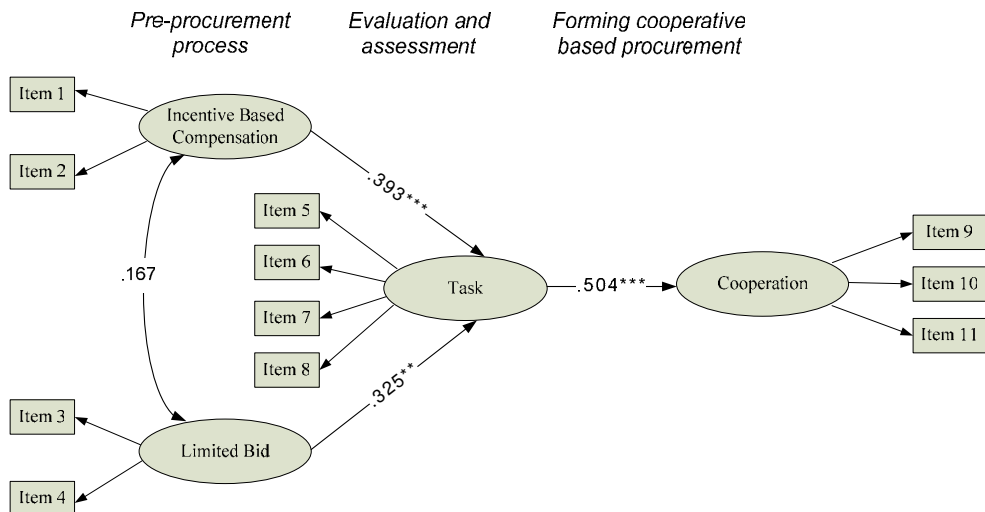


Figure 3 Model Showing Results of Tests of Propositions

Table 4
Test of Mediation Effect on Cooperation

	Standard Error	Standardized mediation effects	90 % confidence interval	
			Lower bound mediation effects	Upper bound mediation effects
IBC	.077	.198	.091***	.351***
LB	.075	.164	.059***	.314***

***p<.01

4.5. Test of propositions

The proposed relationship between IBC and Task (H1) is substantive and significant (.393; p<.01). We also hypothesized that Task would mediate the relationship between IBC and Coop. By performing a Monte Carlo test of variance using bootstrapping, our results indicate there is a significant mediating effect (.198; p<.01) with a lower bound of .091 and an upper bound .351 (90 % confidence interval). Hypothesis H2 implied that task mediates the relationship between LB and Coop. This effect is positive and significant (.325; p<.05). Moreover, after performing the Monte Carlo bootstrapping procedure, the results indicate there is a significant mediating effect (.164; p<.01) with a lower bound of .059 and an upper bound .314 (90 % confidence interval). Finally, a direct effect was hypothesized between task and cooperation (H3). This effect is also strong and significant (.504; p<.01). The proposed model and all of the hypotheses are thus confirmed.

5. Conclusions

Our research proposed a theoretical model to testing three hypothesized relationships. The model was validated and results indicate that partner selection based on task related attributes mediates the relationships between both incentive based compensation and limited bid invitation, and ultimately cooperation between clients and contractors. We therefore confirmed that task related attributes mediate pre-procurement processes and directly affect cooperation. Our findings indicate that cooperation, which is important in the management of complex and uncertain construction projects, can be established through cooperative procurement procedures. Hence, construction clients should be encouraged to include incentive based compensation and limited bid invitation coupled with careful partner selection techniques as a means for increasing effectiveness and enhancing cooperation during concurrent engineering and construction processes.

Appendix: Survey questions in the three stage model

1. Pre-procurement processes

Incentive Based Compensation

What types of compensation do you use when procuring a main contractor? (1=Very seldom; 7= Very often).

Reimbursement with incentives.

Reimbursement with bonus opportunities.

Limited bid

What types of tender invitations do you use when procuring a general contractor? (1=very seldom; 7= very often).

Very limited tender invitation (the client invites a small number of (2-4) tenderers).

Selective procurement (only one contractor is invited to submit a tender).

2. Evaluation and assessment

Partner selection

How important are the below evaluation parameters when choosing a general contractor? (1= Unimportant; 7= Very important)

Willingness to change (would consider new ideas)

Reference objects

The tenderer's estimated ability to cooperate with the project team.

Technological competence.

3. Forming cooperation based procurement

Cooperation

To what extent do you use different tools/ methods for increasing cooperation among the different participants in the construction process? (1=Very seldom; 7=Very often)

Formulation of shared objectives

Arena for discussion of relationships/solving conflicts

Teambuilding exercises (e.g., initial meeting workshops, etc)

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It's all about Trust and Loyalty: Partner Selection Mechanisms in Tourism Networks

Ossi Pesämaa

Email: ossi.pesamaa@ltu.se
Luleå University of Technology
Home phone: +46(0)920-225397

Daniel Örtqvist

Email: daniel.ortqvist@ltu.se
Luleå University of Technology
Division of Business Administration and Management
Phone: +46(0)920-492282

Joseph F Hair Jr

Kennesaw State University
Dept. of Marketing
Email: jhair3@comcast.net
Home Phone: 678-797-9736
Home Fax: 678-797-9783
Mobile: 770-335-7962

Abstract

Does expected partner or task related criteria affect how trust and loyalty is developed between tourism firms? This paper poses a model developed on the assumption that well defined partner and task related partner expectations and experienced trust build loyalty between tourism firms. The model provides a more precise assessment for scholars that believe trust is related to the risk associated with personal relationships between two or more firms, and that risk depends on expectations derived from personal relationships. The model also integrates the role of experienced trust in transforming different partner selection criteria into loyalty. The contribution of the model is that it provides insights into cooperative relationships by examining the role of trust between small tourism firms when cooperation is being established. Data from a sample of 99 tourism firms in the Northern U.S. is used to test the model. The findings provide implications for tourism scholars and policy-makers interested in developing managerial strategies based on personal relationships.

Introduction

No firm is an island (Håkansson and Snehota, 1990) and especially not a tourism firm (Morrison, 2002). When providing the fragmented activities tourists request, tourism firms benefit from coordinating operations with other tourism firms' (Ingram and Roberts, 2000). Crotts, Buhalis and March (2000) argued that tourism firms form networks to become more competitive vis-à-vis other networks of firms. Regardless of the formality in the attempt to form a network we know that a tourism firm is dependent on other tourism firms' (see for instance Buhalis, 2000 for a tourism stakeholder model). Tourism firms share critical information, resources and decisions without knowing an exact outcome of it, and often market their supply of products and services together with other local tourist firms. They also depend on other tourism firms' to recommend their products and services, and share approaches on how to manage conflicts arising from locals regarding shared rights to get access to fishing, hunting and other public resources. To cope with this kind of social risk tourism firms establish different processes that are dependent on loyalty and trust. While research has demonstrated the importance of constructs such as loyalty and trust in the relationships between the tourism firm and the tourist, there is limited work on such constructs with networks of tourism firms. In tourism studies, both customer loyalty and destination loyalty have been studied from the perspective of the tourist (see for instance Oppermann, 2000). Here we propose additional benefits for the loyalty construct in tourism research by examining it into a networking situation.

In examining how trust and loyalty are created between tourism firms within a network, we hypothesize the importance of different partner selection criteria. We justify such modeling from the large number of scholars acknowledging cooperative strategies as highly important for tourism firms (see for example, Palmer and Bejou, 1995). In this study, cooperative strategies are referred to as partner selection criteria that are likely to influence how tourism firms cope with the social risks inherent in producing and delivering products and services to tourists. Tourism firms select partners' carefully because they want predictable outcomes that match their expectations. They also select partners because they have different roles. Inherent in this process is the

desire to determine whether or not a potential partner can contribute to the relationship (Geringer, 1991) or just be a good friend (Ingram and Roberts, 2000).

Earlier research draws on several important aspects in understanding how this process is likely to work. One important consideration is that firms select partners because they believe these partners can deliver a specific task, resource or learning experience that contribute to the firm performance (Hitt, Dacin, Levitas, Arregle and Borza, 2000). This first link is the expectancy the partner has regarding a potential partner. Another aspect is uncertainty and how firms conduct a systematic selection of a partner according to given contextual circumstances (Das and Teng, 2000). These hypothesized relationships with expected performance plus contextual uncertainty have been modeled and tested by structural equation modeling within the tourism industry (Huang, 2006). Our research builds upon these previous findings and explores how loyalty is influenced by expectations regarding trust, which ultimately has an effect on loyalty. Our primary focus then is the extent to which expected partner or task related criteria affect how trust and loyalty are developed between small tourism firms. We particularly focus on tourism firms located in remote areas because we believe efficiency in relationships such as trust and loyalty can be an important aspect of coordination and will facilitate exchanges across the physically long distances between the firms.

Why tourism firms develop precise expectations as they develop loyalty

When modeling the efforts of tourism businesses to build strong brand names for a destination, loyalty is an important construct. One question is why should firms' be loyal to other firms? A possible explanation is firms' have to cope with risk due to uncertainty. Uncertainty is a consequence of the experienced complexity that firms encounter in their everyday business operations (Thompson, 2004). However complexity is a difficult concept that many researchers do not consider. In mathematical modeling complexity is defined as something that relates to situations in which it is impossible to find an optimum for a model. Mathematical models often include many variables, and because of the large number of variables the model becomes complex and thus impossible to find an optimum solution. This lack of an optimum solution thus justifies a research question.

In a cooperative situation we have only two variables – to either compete or cooperate. The rationality to compete could easily find an optimum solution, if the discount variable is high enough (Axelrod, 1984). This means that if by letting a partner down instead of cooperating a firm can gain a larger portion of total value, there is little rationality to cooperate. A problem arises however because the discount variable is unknown and cooperation is an ongoing process with endless situations that also affect a firm's reputation. These endless cooperative processes are still based on the same two variables – to compete or cooperate. The endless repetitive situations also closely reflect real situations (Gulati, 1995). Such situations are mostly explained by the extent to which a firm is willing to trust the other firm (Axelrod, 1984). In the best case the firm is also loyal to the other firm (Mavondo and Rodrigo, 2001). Because of the difficulty in mathematically simulating the situation, researchers have increasingly examined empirical settings in which trust and loyalty play a very detailed role.

In this paper we propose a model that examines how firms cope with risk associated with this kind of uncertainty (See Figure 1). We posit that trust begins with the process of selecting partners carefully. The first part of the model represents the expectations firms have of future partners. These criteria can include many things. Two of the most relevant criteria based on the number of citations in this field (see Social Citation Index) are partner related (Geringer and Herbert, 1991) and task related criteria (Geringer, 1991) for partner selection. We believe these criteria have an effect on experienced trust, which is necessary to achieve a loyalty orientation (Mavondo and Rodrigo, 2001).

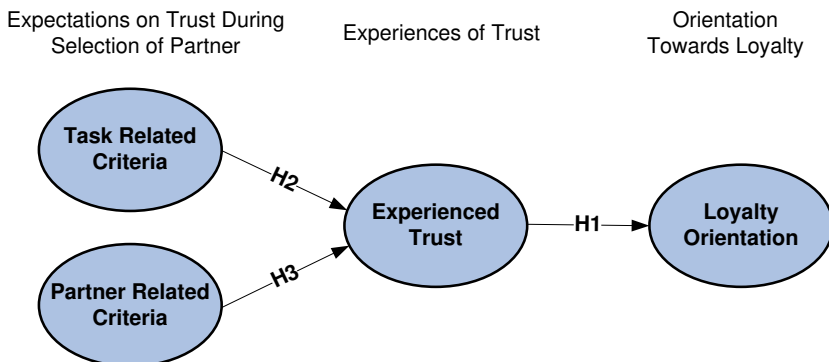


Figure 1: The Gap of Trust and its Effect on Loyalty Orientation

Loyalty Orientation

Loyalty is one of the most important constructs in understanding inter-organizational relationships (Guest, 1995; Morgan and Hunt, 1994). Some scholars believe loyalty is beneficial in understanding how inter-organizational relationships evolve (Mavondo and Rodrigo, 2001). Indeed, it has been suggested that loyalty in inter-organizational relationships can explain firm performance (Gardner, 2005). In our research, loyalty is an orientation, which means firms act cautiously in order to maintain their inter-organizational relationships (Mavondo and Rodrigo, 2001). In acting cautiously Mavondo and Rodrigo (2001) suggest four items as relevant for measuring cautious actions – avoiding uncomfortable situations, no public confrontations, providing avenues out of difficult situations and resolving conflicts in an agreeable way. Loyalty is therefore an important construct in research on inter-organizational relations in tourism.

The loyalty construct is useful in both internal and external affairs (Huang, 2006). In internal affairs a loyalty orientation is evident in how tourism firms in different practical situations pursue loyalties. For example, a firm is exhibiting loyalty when it bargains for common network resources within a specific strategic or geographical domain. Especially in small communities, where social proximity of firms is high, firms are reluctant to confront someone without having a strong loyal backup (Axelrod, 1984). In external practical situations between tourism firms' loyalty sometimes also performs the function of bridging between structural holes (Ingram and Roberts, 2001). This external function means a firm opens avenues for excess capacity within its own system. When hotels have all rooms booked they pass on a guest to another hotel. The literature presents several possible antecedents to loyalty (Gardner, 2005). Here we examine one of the constructs proposed to be most prominent in understanding loyalty in networks of tourism firms.

Experienced trust

Trust in a partner is likely to create positive behavioral intentions toward that partner and result in loyalty. Boon and Holmes (1991) demonstrated these behavioral intentions with an illustration that in individual relationships trusts in a life partner can be an important predictor of marriage intentions. Drawing from such arguments we propose that firms experiencing trust in relationships with their partners also will exhibit a loyal orientation towards these partners (Mavondo and Rodrigo, 2001). Trust is a key factor in establishing long-term relationships between tourism firms (Ingram and Roberts, 2001). Earlier research has identified the many different roles trust has for developing strong, lasting and beneficial relationships (For an extensive discussion on this matter see Lane and Bachmann, 1998; and Rousseau, Sitkin, Burt and Camerer, 1998). Trust is perceived as a matter of risk with direct effects on loyalty (Brockner, Siegel, Daly, Tyler and Martin, 1997). Trust reflects the confidence and positive expectations a firm has about another service provider (Gounaris, 2005). We therefore define experienced trust as mutual honesty and confidence that includes few negative surprises and is established on the basis of similar values. Substantial evidence in the literature supports the role of experienced trust as being an antecedent to loyalty (Morgan and Hunt, 1994; Brockner, Siegel, Daly, Tyler and Martin, 1997; Mavondo and Rodrigo, 2001). As a result, we propose the following hypothesis:

Hypothesis 1: Loyalty is positively related to trust in networks of tourism firms.

Partner selection and trust

Geringer (1991) argued that selecting a partner is an important task since it reflects the primary needs of a firm. In our research we explore two different partner selection criteria – task and partner related criteria. We propose that both criteria are related to experienced trust. Task related criteria include the active search for specific kinds of skills (i.e. same or different) that are consistent with the objective to make money and take on risk. The objective to make money and take on risk is an extension of Geringer (1991) and better illuminates how risk perception relates to expectations. Task related criteria were found to effect cooperation (Yilmaz and Hunt, 2001) as well as be important in a firm's strategic efforts to become successful (Geringer, 1991). Therefore, when firms find partners that match these needs they also expect that these needs will help the firm to pursue their strategic goals. Geringer (1991) defined this process as very task related, in which complementary skills and capabilities are desirable. Therefore, we propose the following hypothesis:

Hypothesis 2: Trust is positively related to task related criteria for partner selection in networks of tourism firms.

Partner related criteria are the search for familiarity, similar values and a recognizable, reliable, expected behavior. Initiating similar values (Yilmaz and Hunt, 2001) familiarity (Gulati, 1995) and an expected behavioral reliance is crucial for inter-organizational relationships (Rousseau, Sitkin, Burt and Camerer, 1998) and is likely related to experienced trust (Gulati, 1995). We, therefore, propose the following hypothesis:

Hypothesis 3: Trust is positively related to partner related criteria for partner selection in networks of tourism firms.

Methods

Sample and data collection

This paper is based on a sample of tourism firms in Northern Minnesota. In Northern Minnesota there is a group of 15 local networks of firms' competing against other networks of firms. The networks are formally organized based on 3 percent sales based membership. The income from members is used for shared interests such as events, marketing, signs, policies and shared web. Data for this paper was collected from the best performing two networks (Ely and Lutsen Tofte Tourism Association), where performance was judged based on sales growth. The sampling procedure was also complemented with a pilot study, which encircled these networks as the most reputable in the area of tourism.

A questionnaire was administered to a sample of 254 tourism firms. A total of 99 firms responded and 99 responses were usable for this purpose, which resulted in a usable response rate of 38 percent. Approximately 58 percent of the respondents were male and about 83 percent were 41 years or older. The typical tourism firm that responded had 27 employees, but the number of employees ranged between one and 450. The distribution of types of tourists for the typical firm was 27 percent local tourists, 42 percent regional tourists, 25 percent national tourists, and 6 percent international tourists.

Using Northern Minnesota for sampling has several advantages. One very important advantage is the businesses are located in a remote area. In Northern Minnesota as in other remote areas there are long distances between households, which results in a relatively low economic activity per square kilometer. Long distances are also present between firms. This means long distances to every physical meeting. In a relative sense this results in few companies located close to each other, facilitating a better social control over each others businesses and operations. In Northern Minnesota there used to be many large mining and forest firms. Today a new type of industry is growing around tourism. These new industries demand new service related skills and new types of firm structures, and many small and medium sized firms' operate in service intense industries. In tourism the local product must be focused and in Northern Minnesota the focus is wilderness tourism. There is fishing and boating in the 10,000 lakes, woods full of wild bears and wolves, and a sky full of birds that make this area attractive for wilderness tourism. Many people, especially those from nearby cities, travel there for hunting, fishing, skiing, snowmobiling, boating, canoe safaris, hiking, relaxing, and for silence, fresh air and other wilderness-related leisure activities. These activities also have shared policies in which, for instance, motorboats and canoes are kept separate to prevent conflicts. The tourism resources include large resorts, spas, hotels, restaurants, camps, guides, outfitters, bait and tackle providers, banks, retailers, souvenirs boutiques, different producers of canoes and other producers providing tourists with unique equipment. Virtually all firms are therefore indirectly related to tourism. If not for the tourists many area businesses would have problems to surviving.

Measurement

All constructs were measured on five-point Likert scales ranging from 1 = unimportant to 5 = very important. Loyalty was measured using four items in which the firm informants were asked to estimate how important loyalty is for the firm's performance, especially considering situations in which the firm wants to (1) avoid uncomfortable situations, (2) not confront interorganizational partners openly in meetings, (3) give avenues out of difficult situations and (4) resolve conflicts in an agreeable way. This operationalization of loyalty was developed from Mavondo and Rodrigo (2001).

The experienced trust construct consisted of six items in which firm informants were asked to estimate how important trust is for firm performance if (1) the partner is honest, (2) truthful, (3) confident, (4) shares a mutual trust, (5) has not been negatively surprised and (6) shares the same values. This operationalization of trust is almost identical to Mavondo and Rodrigo (2001).

Task related criteria for partner selection were measured using five items. Respondents were asked to indicate the relative importance they would prefer a potential partner to have if a potential partner comes from (1) same line of business, (2) same ambition to make money, (3) same competence, (4) different competence, and (5) same willingness to take on risk. This construct was developed on the basis of Geringer (1991).

Partner related criteria for partner selection were measured using four items. The items were followed by the same situation as the previous question regarding preferable attributes a potential partner should have. Sample items include the relative importance that a potential partner is (1) familiar, (2) acts as expected, (3) is trustworthy in his or her behavior, and (4) he/she shares my values. This construct was developed from Volery (1995).

Results

Table 1 presents means, standard deviations, reliabilities and correlations. The correlations are moderate and significant at $p < .01$. All composite constructs report Cronbach's α above .7 which indicates that reliabilities are acceptable (Nunnally, 1978).

Table 1.
Descriptives and Correlations

	Mean	St.d.	PRE	TRE	TRUS	LOYA
Partner related expectations (PRE)	4.19	.38	1.00	.30	.49	.40
Task related expectations (TRE)	3.45	.44		1.00	.38	.28
Trust (TRUS)	4.27	.50			1.00	.62
Loyalty (LOYA)	3.63	.48				1.00
Cronbach's α			.79	.73	.75	.93

N = 99; All correlations are significant at $p < .01$

To test the hypothesized model we employed structural equation modeling using Lisrel 8.72 (Jöreskog & Sörbom, 2001). We estimated the relationships between two types of partner expectations (partner and task related) and trust, and the relationship between trust and loyalty. The two independent constructs were correlated in the model test. The results from this test are summarized in Table 2. Overall, the goodness-of-fit values measures are well within recommended values (Hair, 2006). In sum, there is no difference due to chance between the theoretical model and the observed data. The model explains 30 to 39 percent of the variance in the dependent variables. All path coefficients are significantly ($p < .01$) related in the hypothesized direction, thereby supporting the hypotheses and the model proposed. The standardized coefficients indicate partner related partner expectations are the strongest determinant of trust, although task related partner expectations also are an important determinant of trust. In turn, trust is a significant and strong predictor of loyalty. When estimating a model that also considered paths between the partner selection criteria and loyalty, the resulting coefficients were insignificant, reinforcing our assumption that trust is necessary to transform the influence from partner selection criteria to loyalty orientation.

Table 2.
Results from structural equation modeling

Path descriptions, explained variance and goodness-of-fit values	Parameter estimate	t
Partner related expectations → Trust	0.41	4.53 ^{***}
Task related expectations → Trust	0.26	2.81 ^{***}
Trust → Loyalty	0.62	7.71 ^{***}
R ² – Trust	.30	
R ² – Loyalty	.39	
χ^2 ; d.f.; p	1.86; 3; .60	
GFI	.99	
NFI	.98	
RMSEA	.00	

Notes: N=99, ^{***} $p < .01$, two-tailed tests; Standardized coefficients reported.

Discussion and Conclusions

This study confirms the importance of trust and loyalty for networking tourism firms, and provides a conceptual model and empirical test illustrating how two types of partner selection criteria explains variability in trust, which in turn influences loyalty orientations. Empirical results illustrate that both task and partner related criteria are important and positively associated with trust between tourism firms. The results also reveal that trust explains considerable variance in loyalty orientation, demonstrating its importance for transforming partner selection criteria into loyalty.

Scholars have argued that the increased knowledge for tourism firms networking also has implications for policy in destination development (Buhalis and Cooper, 1998; Tinsley and Lynch, 2001). Managing networks of tourism firms and destinations are challenging tasks. This is especially true because dependencies between tourism firms with different, but closely related products create a need for loyalties. Based on these assumptions, our findings suggest several important implications for tourism research and practice, perhaps foremost by pointing out the possible dependencies between tourism firms making loyalty orientations

indisputably important for maintaining and developing sustainable businesses. Consider also that the firms represent a wide range of unrelated products, all important for one need – the tourists in that area. Loyalty orientations can in such a context advance our understanding and explanation of how different firms pass on their excess capacity to loyalties within the local network. Given the importance of loyalty as described, we also contribute to tourism research and policy by demonstrating how loyalty can be formed among tourism firms potentially or currently cooperating. This implication emerges from modeling loyalty as dependent on expectancies of trust portrayed through partner selection criteria, and transformed through experiences of trust. As such we recognize that loyalty in fact is created from expectancies of partner behavior rather than through their actual behavior.

A particularly interesting implication of our results is the notion that tourism firms build trust, and consequently loyalty, in relationships based on perceived partner similarities. Some literature suggests the opposite – that firms build relationships based on differences and complementariness. Drawing from arguments that similarities help tourism firms align for the same goal (task related criteria) and for better understanding each other due to similarities (partner related criteria) we found conceptual as well as empirical support for the role of similarities in creating trust and loyalty in tourism partnerships.

We also present several other avenues for further research on loyalty between networking tourism firms. It is likely that our results are especially valid for the context in which they have been studied. The sample consists of tourism firms located in a remote area with high social proximity. There is a tradition where most firms likely know the other companies, which can influence one's social back up. Some firms may know the structure better than others. Some firms may therefore benefit from using the social system more efficiently and through social ties coordinate different resources and operations.

We also propose the specific complexity of dealing with loyalty over geographic distances. Since the firms included in the sample share joint resources over geographically-long distances, it likely puts strains on the role and importance of loyalty when planning financially demanding events (such as for instance a conference). Therefore, loyalty should be highly emphasized for studies in remote areas.

Especially for policy making we propose that loyalty orientations can be important to consider in expanding tourism programs in remote areas. This is a challenging task since loyalty orientations may be difficult to uncover. But the result would be useful because it could be controlled through joint programs. Subsidies intended to stimulate an interest like tourism can be valuable in fostering expectancies of potential outcomes of networking. As such, and as illustrated by our results, such expectancies whether task related or partner related can transform experienced trust in achieving a common goal and ultimately to a loyal orientation.

In sum, we proposed a theoretical model and obtained strong empirical support. We demonstrated that partner and task related criteria simultaneously support experienced trust, which has an effect on loyalty. We have empirically and theoretically opened a gap of how partner selection expectations relate to experienced trust, which in turn have a detailed role in forming loyalty. We hope our efforts stimulate more research on this topic.

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Cooperative Strategies for Improving the Tourism Industry in Remote Geographic Regions: An addition to Trust and Commitment Theory with one Key Mediating Construct

Authors¹

Ossi Pesämaa

Luleå University of Technology

Email: ossi.pesmaa@telia.com

Home phone: +920-225397

Joseph F Hair Jr

Kennesaw State University

Department of Marketing

Email: jhair3@comcast.net

Home Phone: 678-797-9736

Home Fax: 678-797-9783

Mobile: 770-335-7962

Abstract

The success of cooperative relationships is influenced by interorganizational commitment, which is a long-run goal of networks. Our research examined cooperative relationships in the tourism industry to better understand what makes them successful. The study is an extension of previous empirical research on commitment. The overall research questions were: “What factors lead to interorganizational commitment in remote tourism destinations?” and “What are the relationships between the factors?” A literature search was conducted to identify factors related to organizational commitment. Search findings suggested a model proposing that interpersonal commitment mediates the effect of trust and reciprocity on interorganizational commitment. Data for the model was collected from a sample of tourism firms in successful cooperative networks. The theoretical model was purified based on convergent, nomological and discriminant validity as well as construct reliability. Our findings demonstrated that the relationship between trust and interorganizational commitment is in fact mediated by interpersonal commitment. We confirmed that reciprocity is directly related to interorganizational commitment, and is not mediated by interpersonal commitment. Thus, tourism firms should develop cooperative strategies in their networks by focusing on enhancing interpersonal commitment through trust, thereby ultimately helping to strengthen interorganizational commitment.

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Introduction

The growing acceptance of tourism networks has led to an interest in the social aspects of cooperative relationships that tie firms to each other (Cohen, 1984). Social relationships are typically based on commitment which is established through trust and reciprocity (Mavondo & Rodrigo, 2001; Gulati & Sytch, 2007). Within this context, commitment means one firm works for all and all firms work for the survival of individual firms. Indeed, the loss of even one member of a network decreases the variety of products and activities offered to customers, as well as the ability to meet customer expectations. Thus, firms that understand the role of cooperation will accept individual short-term sacrifices to achieve longer-term benefits for the group (Dwyer, Schurr, & Oh, 1987; Gundlach, Achrol & Mentzer, 1995; Garbarino & Johnson, 1999; Yilmaz & Hunt, 2001; Ekelund, 2002; Mukherjee & Nath, 2003).

The success of cooperative relationships is influenced by interorganizational commitment, which is a long-run goal of networks (Wetzels, de Ruyter & van Birgelen, 1998; Pesämaa & Hair, 2007). This concept has been operationally defined as the extent to which network firms are willing to agree to enduring relationships with other firms (Mavondo & Rodrigo, 2001; Sharma, Young & Wilkinson, 2006). By better understanding the role of interorganizational commitment, it is possible to more accurately predict the success of cooperative strategies.

Many studies have examined organizational commitment. This paper extends earlier studies by focusing on interorganizational commitment. Organizational commitment represents the individual's ties to the organization whereas interorganizational commitment involves relationships between organizations. Much of the commitment-related literature has focused on why some relationships break up while others survive to reach higher levels of exchange (Wildeman, 1998; Park & Russo, 1996). Commitment generally has been represented either as a key-mediating factor (Morgan & Hunt, 1994; Garbarino & Jonson, 1999) or a dependent variable measuring the "strength or success" of a relationship (Mavondo & Rodrigo, 2001).

Previous researchers have suggested the need to expand our knowledge of potential mediating constructs between trust and commitment (Morgan & Hunt, 1994; Garbarino & Jonson, 1999). This paper addresses that need by hypothesizing that commitment is an important consideration in developing successful tourism destinations, particularly in remote locations. Our research asks: "What factors lead to interorganizational commitment in remote tourism destinations?" and "What are the relationships between the factors?" The research provides two major contributions: (1) an expanded theoretical model of commitment, and (2) an empirical test of the model. The model and empirical test are therefore fundamental to our proposed theoretical contribution.

The Model

A firm is an organizational arrangement often involved in interorganizational networks. Interorganizational networks are outcomes of cooperative exchanges between individuals involved in relationships between firms (Blau, 1964). Exchanges between firms imply, therefore, that the relationships extend from the 'inside' of one organization to the 'inside' of another organization (Zaheer, McEvily & Perrone, 1998; Pesämaa & Hair, 2007). This combination of individuals and firms is often referred to

as the embedded unit of analysis. That embedded unit of analysis strongly influences theory in this field, because relationships between individuals are assumed to affect business relationships. Interorganizational relationships are therefore important for the firm and its competitive environment because they not only influence the success of cooperative strategies they also tend to create economic imbalances. As a result, firms involved in exchanges have loyalties to each other even if it means the loss of short term business opportunities (Pesämaa, Hair & Örtqvist, 2007).

Relationships between tourism partners involve risk. To minimize these risks, firms in successful networks share resources and operations with others they can trust. Trust initially leads to greater interpersonal commitments (Becker, 1960; Axelrod, 1984; Morgan & Hunt, 1994; Wetzels, Ruyter & Birgelen, 1998; Garbarino & Johnson, 1999; Varamäki, 2001; Yilmaz & Hunt, 2001; Ekelund, 2002; Rodriguez & Wilson, 2002; Wong & Sohal, 2002; Mukherjee & Nath, 2003) as does reciprocity (Kumar, Scheer & Steenkamp, 1995b; Mavondo & Rodrigo, 2001). Moreover, interpersonal commitment ultimately influences interorganizational commitment (Yoon, Baker & Ko, 1994; Mavondo & Rodrigo, 2001). These relationships and hypotheses are summarized in Figure 1, except hypotheses 6 and 7 which focus on mediation. Interorganizational commitments develop based on a combination of trust and reciprocity (Portes, 1998), but are ultimately enhanced through interpersonal commitment. Interpersonal commitment, therefore, will likely mediate the effects of trust and reciprocity.

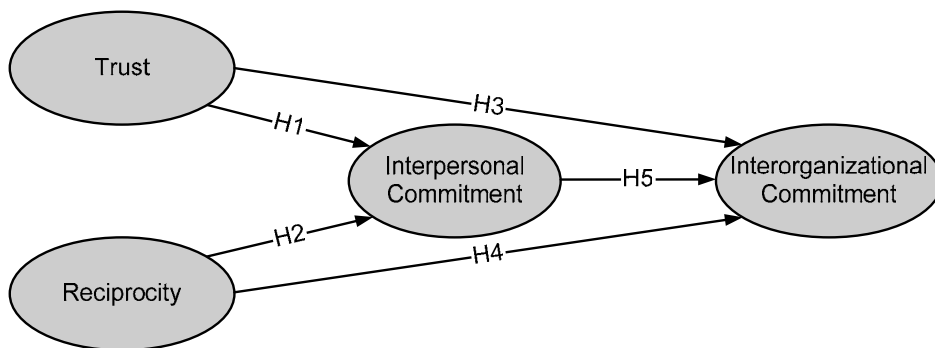


Figure 1 Model of Trust, Reciprocity, Interpersonal and Interorganizational Commitment

Interorganizational Commitment (IOC)

Tourism firms in networks rely on other organizations' activities and future plans, and therefore develop cooperative strategies and inter-dependencies that involve sharing resources, decisions, operations and social activities. Commitment is an established construct in tourism (Medina-Munoz & Garcia-Falcon, 2000) as well as in Scandinavian tourism contexts (Björk & Virtanen, 2005). It is also a key factor in building long-term interorganizational relationships (Morgan & Hunt, 1994; Gundlach, Achrol & Mentzer, 1995; Mavondo & Rodrigo, 2001), and an integral component of exchange theory (Cook & Emerson, 1978). Finally, interorganizational commitment

is important for the tourism industry because it demonstrates how success and strength can be achieved by combining the resources of several tourism firms at the destination level (Huybers & Bennett, 2003).

The theoretical framework for our model is an extension of Mavondo & Rodrigo (2001) and specifies interorganizational commitment as a strategic objective pursued by tourism network partners. Thus, we propose that interorganizational commitment is based on reciprocity and trust (Anderson & Weitz, 1992; Kumar, Scheer & Steenkamp, 1995; Morgan & Hunt, 1994) and mediated by interpersonal commitment (Mavondo & Rodrigo, 2001).

Interpersonal Commitment (IPC)

Interpersonal commitment is an integrating mechanism of groups. Some groups are strongly integrated whereas others have looser relationships (Yoon, Baker & Ko, 1994). Interpersonal commitment is therefore proposed as a mediating element of our theoretical model.

Interpersonal commitment is a value-based relationship developed over a long period with consequences for future decision-making. It includes shorter-term sacrifices as well as those that will be made in the future, and involves specific commitments by participating firms. One study of interpersonal commitment (Ingram & Roberts, 2000) found that trust is built in networks through dependencies. The dependencies, such as sharing customers with one another as well as information and decision-making, elevated the importance of trust and reciprocity. The dependencies also involved interlocks that bridged service gaps perceived by customers, and therefore represented actual commitments between firms based on trust. As an extension of this research, we propose that as firms build trust and expect reciprocity in relationships, they also make interpersonal commitments that influence future endeavors and ultimately lead to interorganizational commitment.

Reciprocity (RCP)

Reciprocity is the practice of give and take and is crucial for local development (Portes, 1998). It is driven by norms of exchange in which individuals feel obligated to return favours (Mavondo & Rodrigo, 2001). In the tourism industry, networks perform an important function for destinations by coordinating activities. These myriad activities between different firms such as hotels, restaurants, bars, ski resorts, camps, and guides, are often sustained through personal relationships involving reciprocity.

Reciprocity is important in studying success because it varies by context (Portes, 1998). Sometimes reciprocity necessitates immediate benefits but it also may involve expectations of future returns, although the initial returns may not be equal. In our research, reciprocity is therefore defined as a component of a person's cognitive system (i.e., values, ideas and experiences) that collects information, facts and feelings concerning how past exchanges were carried out, and uses them to evaluate the expected value of current decisions and to determine future commitments. Since research has shown that reciprocity leads to commitment (Kumar, Scheer & Steenkamp, 1995; Mavondo & Rodrigo, 2001), feelings of being treated well are likely to lead to good outcomes and have a self-reinforcing effect that creates beliefs the relationship will lead to positive future outcomes.

Trust (TRU)

Trust involves personal relationships that are based on earlier experiences and involve honesty as well as confidence, and encourage firms to rely on others in exchange relationships. Many studies have shown that trust leads to commitment (Becker, 1960; Axelrod, 1984; Morgan & Hunt, 1994; Wetzels, Ruyter & Birgelen, 1998; Garbarino & Johnson, 1999; Varamäki, 2001; Yilmaz & Hunt, 2001; Ekelund, 2002; Rodriguez & Wilson, 2002; Wong & Sohal, 2002; Mukherjee & Nath, 2003). We propose that trust can be reinforced through interpersonal commitment (Morgan & Hunt, 1994) and ultimately enhance interorganizational commitment (Mavondo & Rodrigo, 2001).

Hypotheses

We summarize the foregoing discussion in terms of the following hypotheses:

- H1 Trust is positively related to IPC
- H2 Reciprocity is positively related to IPC
- H3 Trust is positively related to IOC
- H4 Reciprocity is positively related to IOC
- H5 IPC is positively related to IOC
- H6 IPC mediates the relationship between trust and IOC
- H7 IPC mediates the relationship between reciprocity and IOC

Method

Qualitative research (observations, documents and interviews) was used to design the research instruments and identify an example of successful network relationships in tourism. The initial research was followed by a quantitative survey to empirically test the hypothesized model. A sample of 254 firms was surveyed and responses were received from 99 individuals in these firms (39% response rate).

Sample

This study sampled two tourism networks in Northern Minnesota (N. MN), a geographical area with many similarities to Scandinavian countries, likely because many Scandinavians previously emigrated there. N. MN is a remote geographical area that has low population density (based on persons per square kilometer). Geographically this area of N. MN is positioned between the 10,000 lakes near the Canadian border and Lake Superior. There are many Scandinavian names and communities in this area based on the Scandinavian heritage, and cultural similarities are widespread. For example, as in many Scandinavian countries, people share a strong identity and work ethic. Successful cooperative tourism networks are in this area sharing many strategic activities on a formal basis. As a result, the tourism networks in this area were considered relevant to study for Scandinavian purposes.

The area has fifteen formal tourism networks. Network activities for members are financed by a contribution of three percent of sales. One program the networks cooperate on is sales strategies to attract tourists. The goal is to increase service quality and efficiency at the destination level by sharing costs of activities, facilities and marketing communications. This helps network members to outperform other destinations. Two of the networks were identified by experts and practitioners from both Sweden and the U.S. as being especially successful – Ely and Lutsen Tofte

Tourism Association (LTTA). To confirm their success, sales increases for the two networks also were examined. Member lists provided by these networks were used to draw the sample for this study.

The area is also an attractive place for wilderness tourism. The area is home to approximately 1.2 million birds, 1 million deer, 10,000 lakes, 30,000 bears, 2,500 wolves and plenty of fish. In addition, one of the destinations studied (ELY) grows during the peak season from 3,500 residents to 35,000, and hosts more than 700,000 visitors. The smaller local network, Lutsen Tofte Tourism Association (LTTA), is located near Lake Superior. Most tourism in Ely is based on canoeing and related outdoor activities, but LTTA has luxurious Spas and a Ski resort. Large investments have been made in hotels, shops, restaurants, and other facilities, such as providing equipment to tourists (e.g. clothing, skis, snowshoes, canoes, etc.). These considerable investments were driven by the desire to provide first class wilderness experiences to tourists. Obtaining funding for this type of investment is not easy. But creative firms in remote regions have learned that balancing hotels and cottages with the sale of second homes, including time-shares, can stimulate investment.

Questionnaire

The questionnaire development process began with a review of the relevant literature on four multi-item constructs (Mavondo & Rodrigo, 2001) reflecting different aspects of cooperative network relationships. Previously used constructs were examined and items that specifically related to this research were selected. Next a series of in-depth interviews were conducted with several experts in this field as well as individuals active in tourism firms similar to those that were included in the study. From these interviews several other questions were developed to cover issues not included in the previous studies. A preliminary version of the questionnaire was pretested and a couple of minor revisions were necessary. The final questionnaire included a total of 28 items related to the four constructs, plus firm classification information such as number of employees and annual sales. Scale items were measured using a 5-point Likert scale ranging from 1 = Unimportant to 5 = Very Important. Respondents were asked to indicate how important each component of the four constructs (trust, reciprocity, IPC and IOC) was to firm performance. The constructs and the items included in the final analysis are shown in Table 1.

Table 1 Operationalizations of Construct Indicator Variables

<u>Interorganizational Commitment (IOC) 3-items</u>	<u>Interpersonal Commitment (IPC)3-items</u>
Please assess the importance of interorganizational commitment among your network partners for your own business performance?	Please assess the importance of interpersonal commitment among your network partners for your business performance?
IOC 1: How important are promises to exchange resources (e.g. cottages, rooms, staff, boats) inside our network?	IPC 1: How important to developing relationships with my network partner(s) is providing future advantages for my company?
IOC 2: How important is allocating more resources (e.g. lodging capacity, competent staff and equipment) to business relationships within the network?	IPC 2: How important is the intention to allow my network partner(s) more decision-making in the future?
IOC 3: How important is being bound to the network for future operations?	IPC 3: How important is sharing similar business values with my network partner(s)?
<u>Reciprocity (RCP) 3-items</u>	<u>Trust (TRU) 6-items</u>
Please assess the importance of reciprocity among your network partners for your business performance?	Please assess the importance of trust in the network for your own business performance?
RCP 1: How important is the practice of “give and take” of favors in the relationship between my network partner(s)?	TRU 1: How important is it that my network partner(s) are honest and truthful with me?
RCP 2: How important is feeling a sense of obligation to my network partner(s) because they do favors for me?	TRU 2: How important is it that I have high confidence in my network partner(s)?
RCP 3: How important is it that network businesses return favors?	TRU 3: How important is mutual trust in developing relationships with my network partner(s)?
	TRU 4: How important is it that network partner(s) not try to take advantage of our relationship for their company’s own sake?
	TRU 5: How important is it that I have not been negatively surprised by the actions of my network partners?
	TRU 6: How important is it that I can rely on my network partner(s) to share my values?

Multivariate analysis methods.

Issues related to instrument reliability and validity were examined first. The statistical technique of exploratory factor analysis was used to eliminate items that did not meet pre-specified criteria for inter-item correlations and factor loadings (Hair, et al, 2006). Exploratory factor analysis reduces and summarizes initial questionnaire items retaining a large proportion of their explanatory power. Principal components using a varimax rotation was the method of factor analysis. Application of the method reduced the 28 original items to only 15.

In the next step a confirmatory factor analysis was undertaken. Confirmatory factor analysis differs from exploratory factor analysis because it assesses a theoretical set of factors and confirms if these factors in fact exist. In contrast,

exploratory factor analysis is data driven – the factors emerge from analysis of the data instead of from theory. Confirmatory factor analysis (CFA) was conducted using the AMOS 7.0 software (Arbuckle, 2006). The results included standardized estimates and interconstruct covariances that were used to calculate variance extracted, reliability and construct validity.

Results

Descriptives.

Average means and standard deviations (SD) for each scale are shown in Table 2, as are the correlations. A review of the means shows that trust is considered very important as is interpersonal commitment. In turn, reciprocity and interorganizational commitment exhibit somewhat lower means but are still important. To facilitate analysis and eliminate multicollinearity among construct indicator variables, the individual variables were combined into summated scales for each construct.

Validity and reliability of this study.

Several types of validity were examined. Nomological validity examines whether the constructs are correlated properly based on theory. The four constructs are all positively and significantly correlated ($p < .05$), which supports nomological validity of the constructs (Hair, et al., 2006). Next, we examined convergent validity, which was confirmed since all standardized estimates (i.e., loadings) exceeded .5 (Hair, et al, 2006). The standardized estimates were used to calculate the average variance extracted (AVE). Established guidelines recommend an AVE of $> .5$ and composite reliability scores $> .7$ (Fornell & Larcker, 1981). These guidelines were met with the exception of IPC, which had a somewhat lower variance extracted and composite reliability. However, IPC was considered acceptable for this study.

Next, discriminant validity was examined. The squared interconstruct covariances should be larger than the variance extracted to establish discriminant validity (Hair, et al, 2006), and for this study the criterion was met. Overall, all four constructs met established guidelines (Hair, et al., 2006) and confirmed convergent, discriminant and nomological validity of the constructs, as well as construct reliability.

Table 2 Descriptives, Correlations and Variance Extracted

	N	Average Mean	SD	Construct Correlations and Reliabilities				VE
				Trust	RCP	IPC	IOC	
Trust	99	4.27	.80					.70
Reciprocity	99	3.20	.83	.40**				.53
IPC	99	3.88	.73	.56**	.21*			.37
IOC	99	2.89	.80	.37**	.42**	.46**		.54

*p<.05; **p<.001

SD= Standard Deviation

VE = Variance Extracted

Table 3 Results of Confirmatory Factor Analysis

	Factor loadings				Composite reliability score	Eigenvalue
	TRU	RCP	IPC	IOC		
Trust (TRU)						
TRU 1	.76					
TRU 2	.91					
TRU 3	.91				.93	
TRU 4	.84					
TRU 5	.84					
TRU 6	.74					4.19
Reciprocity (RCP)						
RCP 1		.70				
RCP 2		.70			.77	
RCP 3		.78				1.59
Interpersonal Commitment (IPC)						
IPC 1			.59		.62	
IPC 2			.70			
IPC 3			.51			1.10
Interorganizational Commitment (IOC)						
IOC 1				.76	.75	
IOC 2				.83		
IOC 3				.59		1.61
N = 99; oblique rotation						

Tests of hypotheses.

The first two hypotheses focus on the hypothesized relationships between trust, reciprocity and interpersonal commitment (Table 4). The dependent variable was interpersonal commitment (IPC) and the independent variables were trust (H1) and reciprocity (H2). Both of the regression models are statistically significant (<.05), and the standardized coefficients indicate the relationships between independent and

dependent variables are positive. Model 1 had an R^2 of .309 for the relationship between trust and interpersonal commitment. The relationship between reciprocity and interpersonal commitment exhibited an R^2 of .046. Thus, hypotheses H1 and H2 are both supported, but the relationship between reciprocity and interpersonal commitment is quite small.

The third hypothesis is that interpersonal commitment is positively related to interorganizational commitment. Model 3 had an R^2 of .207 for the relationship between interpersonal commitment and interorganizational commitment. Based on the standardized coefficient the relationship is positive so hypothesis H3 is supported.

Hypotheses 4 – 7 examined whether interpersonal commitment was mediating the relationship between trust, reciprocity and interorganizational commitment. These four hypotheses were tested using hierarchical regression. The dependent variable was interorganizational commitment (IOC), the independent variables were trust (TRU) and reciprocity (RCP), and the hypothesized mediating variable was interpersonal commitment (IPC). Model 4 had a single independent variable – Trust – and assessed its relationship with IOC. Model 4 was significant with an R^2 of .134. In Model 5 a second independent variable – Reciprocity – was included and again the dependent variable was IOC. Model 5 also was significant and the R^2 increased to .221. For both models the signs of the standardized coefficients were positive and the relationships were significant ($<.05$). Therefore, hypotheses H4 and H5 are both accepted.

Table 4 Summary of Simple Regression Models – Hypotheses 1, 2 and 3

Coefficients Variable	Standardized Coefficients	t	Sig.
<u>Model 1</u>			
Trust	.555	6.579	.000
<u>Model 2</u>			
Reciprocity	.214	2.161	.033
<u>Model 3</u>			
Interpersonal commitment	.455	5.038	.000
Model	R	R square	Sign
1	.555	.309	.000
2	.214	.046	.033
3	.455	.207	.000

Table 5 Summary Hierarchical Regression – Hypotheses 4 - 7

Coefficients Variable	Standardized Coefficients	t	Sig.
Model 4			
Trust	.367	3.881	.000
Model 5			
Trust	.240	2.444	.016
Reciprocity	.321	3.271	.001
Model 6			
Trust	.035	.322	.748
Reciprocity	.323	3.492	.001
Interpersonal Commitment	.367	3.589	.001
Model	R	R square	Sig.
4	.367	.134	.000
5	.470	.221	.000
6	.560	.314	.000

Model 4 Predictor: Trust

Model 5 Predictors: Trust, Reciprocity

Model 6 Predictors: Trust, Reciprocity, Interpersonal Commitment

Dependent Variable – Models 4-6: Interorganizational Commitment

We next examined the possible mediating effects of IPC (Model 6). To do so, IPC was entered into the model as a third independent variable, in addition to trust and reciprocity. When IPC entered as a mediating predictor of IOC, we expected that both trust and reciprocity would be less significant and the relationships relatively weaker. If this occurred, then IPC would be functioning as a mediator (Baron & Kenny, 1986). The results show that IPC mediates trust (H6) since the path coefficient for trust is considerably weaker (.322 vs. 2.44) and also insignificant (.748). We can therefore conclude that IPC mediates the relationship between trust and IOC (H6). In contrast, the results show that IPC does not mediate reciprocity (H7) since the reciprocity path coefficient becomes even stronger (3.271 vs. 3.492) and also is significant (.001). We therefore conclude that IPC mediates the relationship between trust and IOC (H6), but does not mediate the relationship between reciprocity and IOC (H7). Thus, hypothesis H6 is supported while hypothesis H7 is rejected.

Discussion and Conclusions

This study explored the characteristics of relationships formed by successful tourism networks in remote geographical regions. To examine these relationships we proposed a model based on previous research hypothesizing that selected factors such as trust and reciprocity influence how interorganizational commitments develop. We further proposed that interpersonal commitment would mediate trust and reciprocity in predicting interorganizational commitment. Our results confirm that trust and reciprocity are related to interorganizational commitment (IOC), but the relationship is different. Interpersonal commitment (IPC) fully mediates the relationship between trust and interorganizational commitment. But reciprocity is directly related to IOC and not mediated by IPC.

One explanation of the finding that reciprocity is not mediated by IPC is that this type of behavior depends more on economic considerations (lower costs, wider assortment of products/services, higher profits, etc.) than on personal relationships. That is, reciprocity motives and expectations are more strongly influenced by perceived economic benefits than personal commitments, and therefore directly lead to interorganizational commitments.

The results are consistent with and extend the theory of relationships between trust and commitment. The work of Morgan & Hunt (1994) and Garbarino & Jonson (1999) provided a strong theoretical foundation for this research, and our findings provide additional support for the relationship between trust and commitment. But a clear gap in their theory is an understanding of the sequential relationship between trust, reciprocity and commitment, both personal and interorganizational, in building successful cooperative strategies (Garbarino & Jonson, 1999). Specifically, an important question is how much emphasis network partners should place on trust and reciprocity in building interorganizational commitment as a foundation for cooperative strategies. As a result, our research examined factors that lead to interorganizational commitment in remote tourism destinations as well as the relationships between the factors.

The findings suggest two different paths to pursue in building interorganizational commitments. One emphasizes building mutual trust among network partners, which will lead to interpersonal commitments to share resources and operational strategies, as well as decisions to pursue mutually beneficial goals. These shared activities will therefore build stronger interpersonal commitments and ultimately interorganizational commitment. The second path to strengthening interorganizational commitment involves emphasizing strategies based on reciprocity. Reciprocity strategies require give and take in partner exchanges, so that all firms benefit in the long run. Emphasizing trust and reciprocity are therefore simultaneous processes that can both result in successful cooperative strategies based on interorganizational commitment.

Implications for tourism firms in remote regions

The success of tourism firms in remote regions ultimately depends on the level of interorganizational commitment. Higher commitment enhances the likelihood of success. Thus, tourism firms should develop cooperative network strategies that focus on enhancing trust, which in turn builds interpersonal commitment, thereby ultimately helping to strengthen interorganizational commitment. But encouraging

reciprocity is also important, and perhaps more so in the short run, because reciprocity strategies lead directly to higher levels of interorganizational commitment.

Theory suggests that cooperative strategies are best achieved through personal relationships. Conceptually, trust is the dominant factor in personal relationships (Ring & Van de Ven, 1992). Thus, emphasizing trust in personal relationships can help firms to develop successful cooperative strategies. Our results suggest that the ability to establish trusting relationships could be used by firms as a hiring criterion along with other competencies, such as an understanding of reciprocity strategies, when long term successful and committed relationships are a major goal.

Limitations

Because this study was a preliminary investigation of the potential influence of three constructs on interorganizational commitment, the models tested were kept simple. As a result, one limitation is the potential underspecification of the models tested. It is possible therefore that the theory could be better explained by some other variable not included. A second limitation is the study used self-report measures and the respondents may have interpreted questions differently than intended or may have been influenced in some way by the structure or format of the questionnaire. Third, this is a cross-sectional study and likely would benefit from a longitudinal approach. Finally, the sample size precluded the use of a validation sample which would have facilitated confirmation of the proposed model. In the future researchers can overcome, or at least reduce, these limitations by including other related constructs, such as loyalty, and by extending the constructs used to reflect emerging issues. Moreover, a larger sample as well as one from another geographic area would facilitate cross-validation of these as well as future findings.

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Against the odds: Building interfirm commitment under trying circumstances

Ossi Pesämaa

Luleå University of Technology

Email: ossi.pesmaa@telia.com

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Abstract

This paper develops and tests a model of how interfirm commitment evolves in two different successful networks in Northern Minnesota. Based on 99 responses two formal cooperative networks with a trying past but with a reputation for now being successful, it is shown that firms' hard cooperation motives significantly guide partner selection in the network and that trust and reciprocal consequences have major roles in building committed interfirm relationships. Soft cooperative motives seem to be of limited importance. Although finding some support for the proposed model, finding that hard cooperative motives have more prominent effects in the causal chain of factors building commitment than was a priori expected.

1. Introduction

Some networks of firms can today outperform certain other networks of firms (Gulati, Nohria & Zaheer, 2000; Kogut, 1988). In these networks individual firms strategize their resources to fit a networks mission. Such network typically coordinates their member's surplus of activities to strengthen the industry structure and position (Gulati, Nohria & Zaheer, 2000). Success of such networks is dependent on the ability to establish effective relationships and commitment in the network in which the firm is operating (Jarillo & Stevenson, 1991). This paper shares this interest, when focusing upon how actors build commitment in successful networks. The paper take a somewhat different perspective, since the goal of this paper is to report findings from a study on how commitment has been established in networks that have become successful although positioned in contexts that can be considered trying (that is operating under difficult circumstances).

Networks are formed with regard to their contexts. Some contexts can be rather trying, including recurrent demanding tasks whether or not depending on a lacking demand or a geographical area that is in an unfavorable position for selling certain goods or services, while other contexts can be characterized by a growing demand and maybe a geographical position in which establishing a business is almost a guaranteed success. These contextual differences have consequences.

What is trying is not universal. In tourism, networks positioned in peripheral areas must overcome barriers related to distance, since accessibility is the most critical institutional success factor (Hall, 2003). Long distances create an unfavorable situation for these businesses. Tourism businesses trying to organize an attraction requiring guides, special transport (e.g. snowmobiles and canoes) and lodging facilities will experience more difficulties when being in the peripheries than if not. But all peripheries are not trying.

Niagara Falls and Mount Everest naturally give a promise of a valuable experience to bring home. Such promises help then develop success. Tourism destinations without a given attraction need to reinforce the “promise” in beforehand by efficient organization and marketing (Gounaris, 2005). Therefore, building commitment in successful networks will likely be different in the presence of good accessibility and big attractions compared to the opposite.

To evaluate how commitment evolved in successful networks that have been built under trying circumstances, this paper takes a perspective on managers’ in two of the most successful tourism networks in Northern Minnesota (Lutsen Tofte Tourism Association and tourism companies related to Ely Chamber of Commerce). Both became successful networks despite operating under trying circumstances. This paper is about learning from what can be considered as successful. These networks were selected after interviews and discussions with a large number of Swedish and U.S. policy-makers. In this data, this paper research theoretically deduced axioms that relate to actors’ experiences, ideas and attitudes towards activating a relationship in order to form a successful network. It is thus assumed that successful networks can be formed from actions and strategies regardless of context. The study utilizes theoretically justifiable behavior constructs. The dependent variable is interfirm commitment (i.e. a rewarding relationship containing loyal bonds implying that all involved firms are striving to equally bind more future operations and resources in the shared network) which has a major role in successful networks. Theory in this paper is based on a sequential model that starts with cooperative motives to enter networks followed by preferences they have about potential partners. In a sequential order partner selection constructs are linked to the two relational consequences trust and reciprocity, which in turn act as determinants of interfirm commitment.

This paper has two main contributions. First, this research is performed in a context that is rather understudied. Second, the research contributes to a wider audience of network success research. Given that success emerges as a result of successful networking activity, cumulative theory building proposes that understanding partner selection and motives for joining a network formation could be important for finally understanding success (Geringer, 1991; Parkhe, 1993; Volery, 1995). However, this theory of successful network formation is not empirically evaluated and exhaustively organized. These shortcomings are especially emphasized by authors such as Lorenzoni & Baden-Fuller (1995), who are alarmed by the limited understanding of relationship principles in management research (e.g. partner selection, brand power maintenance, trust and reciprocity) guiding success. This study thus contributes to the still limited empirical basis of studies exclusively related to synthesizing impacts of motives on interfirm networking (Kogut, 1988; Gulati, 1998), partner selection (Geringer, 1991) and in combinations (Volery, 1995; Wildeman, 1998).

2. Conceptual background and model development

2.1. A broad conceptual background to the model

The model in this study is based on following key arguments.

First, building commitment is especially important for network success in trying contexts. Networks of firms are formed with regard to their context and often with the purpose of outperforming other networks of firms (Ingram & Roberts, 2000). Some networks of firms perform better than certain others, especially in specific contexts.

Second, clear cooperative motives drive cooperation evolvment and commitment in successful networks. Success does not evolve by randomness, especially not in the face of a trying context. Motives can be different in different firms. This paper suggest two broad

categories of motives that is those based on co-producing, co-marketing, etcetera, or more soft, informal characteristics that are less explicit, such as becoming more familiar.

Third, cooperation motives are not directly related to commitment in successful networks. Motives come indirectly via partner selection and relational consequences. This assumption is important because failure rate in networks are very high (Sivadas & Dwyer, 2000 and Hanna & Walsh, 2002). In addition many small firms which typically benefit from networks also have a high failure rate. Combining the high risk of failure in networking with the risk of failure in business create a multiplier effect to fail. Therefore, its not surprising that many companies hesitate when they approach new partners, because they are looking for trustworthy ones. This should therefore be important when facing a context that is trying.

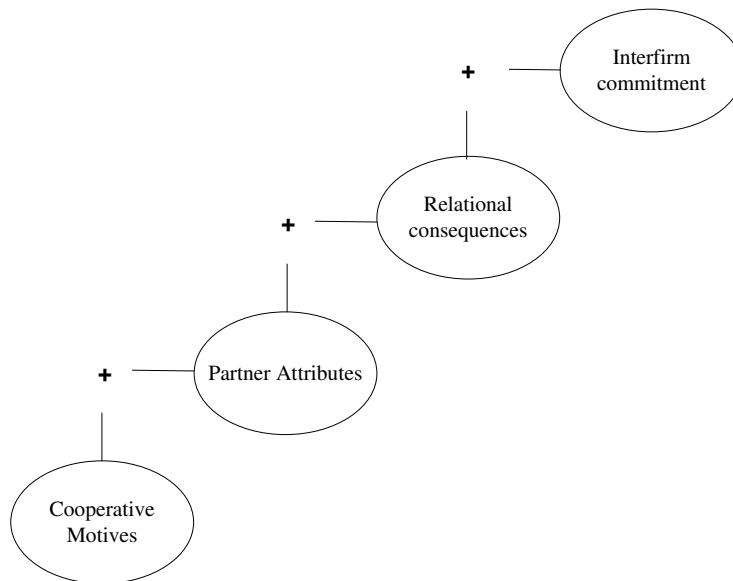


Figure 1:

Model of Establishing Successful Interfirm Networks in Trying Contexts

Developed from Parkhe, 1993; Jones and. Bowie, 1998; Wildeman, 1998; Jones, Hesterly, and Borgatti, 1997; Sparrowe and Liden, 1997; Rosenfeld, 1996; Volery, 1995.

Figure 1 illustrates the background of this paper, which hypothesizes that interfirm commitment evolves from cooperative motives. Motives stresses managers' to find desirable partners in successful networks formed and found in trying contexts. Relevant attributes to further build commitment can be such aspects as trust, network awareness and cultural affinity, since partner selection in trying contexts may be based on finding similar cultural attributes but also upon conscious strategic thinking as captured in trust and network awareness.

In sum, since motives are theoretically interrelated to reciprocal behavior, partners' selection procedures are interrelated to relational consequences (Parkhe, 1993), and commitment is said to be the crown of successful interfirm activity (Wildeman, 1998; Dwyer, Schurr & Oh, 1987). The following stage model is a basis for theorizing on how successful interfirm networks in trying contexts are constructed by its members.

2.2. *The hypotheses constituting the model*

2.2.1 *Motives and partner selection.*

Motives reflect the basic need for cooperation to evolve in the first place. Successful actors are presumed to possess explicit and conscious motives in every deed and opportunity (Edquist, 1997). Two motives are considered to be important for how partners are selected and furthermore commitment evolve under trying circumstances; that is hard cooperative motives and soft cooperative motives. These motives are considered to be the start of cooperation involvement in the networks focused upon, and in particular to three partner selection criteria, (1) selection based on trustfulness, (2) network awareness and (3) cultural affinity.

On the one hand, hard cooperation motives for networking involve firms possessing explicit motives for co-producing, co-marketing, co-purchasing, or co-operating in product or market development (Rosenfeld, 1996; Huggins, 2000). These hard motives are solid in nature in terms of being concretized to what function the network should attain or what the actors want the network to be formed around. They are very much directed to concrete outcomes from networking, since they specifically ask for aspects capturing what is “on the table” and what kind of exchange is to be accomplished. Following this line of reasoning, hard motives are based on the assumption that managerial motives express this embedded ambition to gain control of what should be internally produced or externally supplied. These motives are therefore very concrete and directed to doing something specified in advance. The control of costs, risks, obtaining financing, and even very explicit competence needs in developing or commercializing are considered axioms in such a composite construct. On the other hand, soft cooperative motives are motives for joining networks expressed in terms of informal characteristics, which may be defined as firms solving common problems together and, sharing information. By nature they consist of blurred motives such as just becoming more familiar or, in the absence of concrete ideas, stating that the purpose is to become more flexible (Piore & Sabel, 1984; Sherer, 2003). Importantly, soft cooperation motives concern aspects that are not clearly specified, i.e. no means or goals are clearly known or act as guidance for networking. Next the paper depicts how the two motives can guide the three partner selection constructs when building successful networks in trying contexts.

Cooperation motives and selecting a trustful partner. Both hard cooperation motives and soft cooperation motives can be important for selecting trustful partners in successful interfirm networks that may be found in trying contexts. Even if managers inclined to hard cooperation motives may dislike activities aiming at “just” becoming more friendly and familiarized, tight friendship may be embedded in order to quickly set up the necessary resources (Nohria & Eccles, 1992), regulate secrecy related to physical product development (Fiol, 1989) or market development and distribution (Ingram & Roberts, 2000), as well as performing other concrete network activities. Therefore, although not necessarily on a conscious basis, hard cooperation network motives are likely to search for partners that fulfill all necessary requirements of trust as well as partners who are familiar with and possess the same system of norms resulting in an expected behavior (Axelrod, 1997), since trust per se is a matter of risk (Mayer, Davis, & Schoorman, 1995) where the parties involved exploit one another’s vulnerabilities (Jones & Bowie, 1998). As a consequence, and especially if considering trying contexts where success is not given in advance, a firm possessing hard network motives does search for trust in partners whether or not being aware of it. On the other hand, soft cooperation network motives are also likely to search for partners characterized by trust, as this construct searches in the network for discussions and problem solving. It is likely to calculate trusted exchange partners on the basis of prior experiences,

familiarity and shared values (Axelrod, 1997). A firm holding soft cooperation network motives tends to search for trusted partners to be included in the network. As a result it is proposed:

H1: In a successful network in a trying context there is likely that the more hard network motives a firm has, the more likely it will be to select partners it can trust.

H2: In a successful network in a trying context there is likely that the more soft network motives a firm has, the more likely it will be to select partners it can trust.

Motives and cultural affiliation in partners. In special circumstances affiliation may have a major impact on the situation (Krugman, 1994; Saxenian, 1996; Porter, 1998) and maybe more importantly, a firm may prefer to select partners sharing the same cultural affinity under certain circumstances or if activated by certain promoters. Hard cooperation motives and soft cooperation motives are both posited as being important constructs for guiding such a partner selection. However, the hard motives are likely to be more convincing in significance and magnitude compared to the soft ones. It is well known that culture may cover different attitudes and values and thus work as an obstacle to establishing reliable communication, belonging, strong ties characterized with few disappointments in fulfillment, and common agreements (Hofstede, 1980). In a world that is multicultural with an increasing number of new subcultures (Jermier, Slocum, Fry & Gaines, 1991), firms are aware that failure can be related to different cultures (Geringer & Herbert, 1991). The cultural mechanism may hence be employed to build a safeguard towards undesirable encroachment. Therefore, if firms have certain motives for networking, they are also likely to guide certain choices of selecting partners that are bounded by culture affiliation. At a macro level, regions may have a principal role for cultures, rather than countries (Krugman, 1994). With this in mind, firms in successful interfirm networks positioned in trying contexts are likely to strive to find partners with cultural affinity, since cultural affinity goes back to shared regional and cultural belonging. If a firm has hard cooperation motives, formalization and control requirements are likely to guide it to track partners with cultural affiliation. In fact, recalling the concrete, outcome-oriented nature of hard motives and the context of facing trying circumstances, this selection criterion may be important since affiliation is what the firm understands and can estimate likely outcomes of. On the same premises, even if not necessarily as convincing in strength or significance, soft cooperation motives may require cultural affinity to develop mutual understanding, exchange reliable information on tasks and outcomes related to the firm, and in some cases to other firms in the network. The manager is thus inclined to find those with the same cultural and/or regional background when selecting partners based on those motives, but the hard cooperation motives are more likely to yield convincing significance levels.

H3: In a successful network in a trying context, there is likely that the more hard network motives a firm has, the more likely it will be to look for aspects of cultural affiliation in potential partners.

H4: In a successful network in a trying context there is likely that the more soft informal network motives a firm has, the more it will be likely to look for aspects of cultural affiliation in potential partners.

Motives and selecting partners with network awareness. Even though trust and cultural affinity can be desirable states among partners, managers may work more realistically to clarify terms in contracts and look for more specific competences valuable for exchange. Some of them can actually be rather strategic and tightly connected to tasks and performance. Such selection criteria should be important for building successful networks in a context where cooperation is to be accomplished under trying circumstances. Therefore, a construct called network awareness may be important in addition to what was previously demonstrated. Benassi (1995) refers to network awareness and implies that the firm that is “network aware” allies with partners who realize that their success depends on others, and hence will select partners whose capacity fits current and future deeds. This construct is therefore similar to “handbook” networking when wanting to perform tasks on a strategic basis. Per se network awareness entails that businesses do not stay passive, but search critically on an autonomous basis (Cook & Emerson, 1978) for equal exchange partners with similar and clearly shared strategies (Powell, Koput & Smith-Doerr, 1996), resource complementarity (Wildeman, 1998), financial involvement and the same risk-taking behavior (Benassi, 1995). Together these factors can be categorized as performance related (Geringer, 1991).

As hard network motives explicitly come down to shared strategies, weight power, formally clarified rules and sharing financial involvement, they are likely to lay a foundation for network awareness in partner selection. When having clear and explicit cooperation motives for joining a network that is formed under trying conditions, the hard motives should indeed lead to a search behavior characterized by network awareness. Although they are more likely to be a weak, close to non-significant relationship, the soft network motives should also influence partner search that is based on being network aware, as they both require that firms do not act like competitors, possess desirable task-related skills or resources (i.e. different knowledge or the same industry belonging), share risk willingness, and possess an ability to contribute independently. Without such partner attributes the motives cannot be realized successfully, and especially not in the face of trying conditions. The reason why the soft motives are likely not to exhibit the same strength might be that this construct is less concrete and explicitly related to tasks and performances. Hence it is posited:

H5: In a successful network in a trying context there is likely that the more hard network motives a firm has, the more it will be likely to score high in network awareness when selecting potential partners.

H6: In a successful network in a trying context there is likely that the more soft network motives a firm has, the more it will be likely to score high in network awareness when selecting potential partners.

2.2.2 Partner selection and relational consequences.

Having selected partners, the firm is likely to experience relational consequences. Here, two relational consequences are focused upon: relational experiences of trust or relational experiences of reciprocity. It is known that although a firm may select partners with these constructs in mind, it is not the same thing as actually experiencing them as consequences when having formed relationships in reality.

Relational consequences from selecting partners based on trust. Relational consequences of trust emerge in several different senses. At the basic level, trust refers to experiences of the inherent risk involved in a relationship (Jones, Hesterly & Borgatti, 1997; Jones & Bowie, 1998; Mayer, Davis & Schoorman, 1995). In fact, on what terms the

relationship is established on (i.e. formal/ non formal; performance/ just liking each other) have an effect on development of trust (Gounaris, 2005). The selection procedures (i.e. motives and partners) reflect this fact. In interfirm partner selection procedures, trust works as a mechanism to exclude risky subjects that may threaten or otherwise jeopardize competitive advantages. As with motives, trust is theoretically bounded by the experienced characteristics of partners when cooperating (Parkhe, 1993). A collection of shared norms and experiences (Axelrod, 1997) provide governing principles for overcoming considerations of whether a partner will let one down (maintain trust) and as expected follow the laws of give and take (reciprocity) in the relation. Clearly, the inherent synchronized nature of taking trust into consideration in partner selection indicates in the first place that the consequential relationship formed may also be more characterized by harmony with rules of how to maintain bottom levels of trust and reciprocate an obligated rule (Parkhe, 1993). Therefore, if taking trust into account in partner selection, it is more likely that a firm will experience relational consequences in turn of relational trust and working laws of reciprocity in the relationship when the relation is formed and developed. As such, looking trustful should lead to trustful and reciprocal behavior among partners once selected.

H7: In a successful network in a trying context there is likely that the more a firm selects partners by having trust in mind, the more likely a trustful relationship will develop.

H8: In a successful network in a trying context, there is likely that the more a firm selects partners by having trust in mind, the more likely a reciprocal relationship will develop.

Relational consequences of selecting partners based on cultural affinity. As with trust there may be relational consequences due to partner selection based on cultural affinity. Specific, cultural affinity is argued to be related to relational trust as well as to relational reciprocity. If a firm selects partners who share the same cultural affinity as is evident in a joint cultural and regional belonging, better relational consequences may be expected in the mentioned areas, partly due to the accumulated experiences of how the potential partner may have operated. The reason is that the firm will find it easier to form realistic expectations if sharing the same culture, since it knows and recognizes behaviors among potential cooperative partners (Drakopoulou & Patra, 2002). The firm will also share the same background in making communication and signs of not delivering what is expected among recognizable partners. This entails that trust and reciprocity are more easily developed when the firms start to cooperate. Values intrinsic in a shared culture are probably more or less easy to recognize for outsiders. Once managers take part in sharing a local culture in the form of e.g. stories, symbols, artifacts, and personalities, it is expected that consequently the culture will also emerge explicitly as expected. Cultural affinity thus supports obedience to follow agreed behavior of trust and reciprocity. Therefore,

H9: In a successful network in a trying context there is likely that the more a firm selects partners on a cultural affinity basis, the more likely a trustful relationship will develop.

H10: In a successful network in a trying context there is likely that the more a firm selects partners on a cultural affinity basis, the more likely a reciprocal relation will develop.

Relational consequences of selecting partners based on network awareness. A relationship between selecting partners based on network awareness and relational consequences in terms of trust and reciprocity is also expected. Awareness as a general concept emanates from self-based knowledge that something existing is important. Network

awareness means that the firm is able to initiate others with similar missions in order to gain a strategic fit in the network (Mendelson & Ziegler, 1999), but also to bridge capability gaps that are task-related (Geringer, 1991). These are important aspects of getting partners interested in behaving trustfully and engaging in reciprocal exchange when belonging to a network formed in a trying context. Firms scoring high in network awareness may be likely to prove to their partners that it is interesting and that the partners will benefit from being trustful and performing reciprocal actions. Benassi (1995) also suggests that awareness works as a mechanism for governing future relations, which shows that the conscious actor relies on the rule that success depends on others. Thus, network awareness should promote trustful and reciprocal consequences in relationships.

H11: In a successful network in a trying context there is likely that the more a firm selects partners on a strategic network awareness basis, the more likely a trustful relationship will develop.

H12: In a successful network in a trying context there is likely that the more a firm selects partners on a strategic network awareness basis, the more likely a reciprocal relation will develop.

Relational consequences and commitment. The two mentioned relational consequences should be strong essentials for commitment. Commitment in general is said to rely upon physical and attitudinal intentions. The committed partners are ones that are promising of more future exchange of resources and having the intention to become more operationally integrated (future exchange intentions); contributing on an equal basis (current exchange); and atmosphere of and rewarding relationship (atmosphere), with no intention to discontinue the relationship (future attitudinal component). Conceptually, commitment goes back to sustainable loyalty and devotion (Morrow, 1983), and most of all it reflects the intentions to give specific resources (Gundlach, Achrol & Mentzer, 1995; Birnberg, 1998; Mavondo & Rodrigo, 2001). Prior research implies that there is a strong significant association between trust, reciprocity and commitment (Ekelund, 2002; Varamäki, 2001). Among several arguments, trust preserve a relation by reflecting devotion to staying honest, feeling confident and not taking advantage of a relationship (Mavondo & Rodrigo, 2001), which all are important for building commitment in trying contexts. Relational trust includes control for upholding honesty and confidence, while reciprocity as mechanism instead governs the “rules” of exchange including the sense of feeling obligated to return favors, but also “social” element of how the exchange partner should be treated. In a trying context, no one expect commitment without strong evidence that it may pay off in the future. If a firm is not certain that the mechanisms of gaining positive experiences from relationships are appropriate and promising, it is not likely to show any signs of commitment (Gounaris, 2005). Since commitment includes the intention to invest more resources, experiences from perceived trust and reciprocity should encourage the partner interrelation to go on and again confront a rewarding counteraction. In an ongoing chain of trust and reciprocity (Axelrod, 1984), building commitment could thus be said to function as the ‘foundation’ upon which successful relationships prevail (Dwyer, Schurr & Oh, 1987; Wildeman, 1998).

H13: In a successful network in a trying context there is likely that the more trust a relationship is able to establish, the more likely it will also be to succeed in developing inter-organizational commitment.

H14: In a successful network in a trying context, there is likely that the more reciprocity a relationship is able to establish, the more likely it will also be to succeed in developing interorganizational commitment.

3. Research methods

3.1. Data collection

The test of the hypotheses called for data collection designed by considering networks of firms competing against other networks of firms. This study target success as networks outperforming other networks. However, the road to finding successful networks was not very easy to navigate on, especially when it came to finding such networks that were successful although being in a trying context. Nevertheless, they could be identified. The networks studied to test the model were identified by the following procedure:

Focus in this study was on tourism networks, specifically targeting those in the peripheries and those formed without any given attraction, since these are parameters indicating that they are positioned in a trying context (Hall, 2003). Targeting tourism networks was suitable since such networks are often consciously competing against other networks, and since it is fairly obvious what networks operate under trying circumstances on the basis of the parameters mentioned. One judgment in tracing more or less successful networks in trying contexts was relying on others (panel discussions). In the first step, the study was commenced through asking key policy makers in Sweden about where to find tourism networks having a reputation of being successful. In these interviews, it was fairly evident that success could be studied elsewhere than in Sweden, and in a region where tourism success in the peripheries is especially present. Among three other regions, Northern Minnesota (N. MN) was considered a potential geographical area in which to find a story of success despite not having the best prerequisites of succeeding. When finally getting to N. MN, several policymakers and expert persons in different professional positions were interviewed in order to get a better clue to how things work there. In these discussions key contacts confirmed that there is a structure of totally 15 formal networks. Based on the interviews and sales-based data, two of the networks were singled out as being especially successful (Lutsen Tofte Tourism Association (LTTA) and tourism companies related to Ely Chamber of Commerce). Taken together they both have the reputation of being internationally acknowledged as having developed a leading region in which to take tourists and groups of tourists out on canoe trips and unique wilderness experiences. This fact is also reflected by the considerable growth in terms of sales and material assets invested in, that is, Hotels, Shops, Restaurants and other facilities, but also an industry for providing the tourists with equipment such as clothing, canoes, etcetera. All this contributed to the reputation of being the best in canoe and wilderness tourism.

Besides analyzing this current state of being successful, it is also quite interesting to share the history of this region, since it is successful despite having had a period of many recurrent demanding tasks. According to Mary Somnis, Director of Marketing and Tourism at Iron Range Resources and Rehabilitation Service (IRRRB), the region has gone through a process of many structural changes due to rationalizations of bulk industries such as timber and mining. This reduction of traditional industries gave the region many unsolved practical problems, e.g. difficulties raising capital, not being an attractive region for young people, people leaving the region, and most of all a tough period of finding a new sustainable economy for the region. In a fairly short period of time, tourism companies in this region increased their attractiveness to the region by establishing the necessary resources. For instance accessibility (roads, boats and links to airports), considerable assets (hotels, spas, cottages and second homes) and well-organized marketing communications prove the

considerable investments made in the two destinations. On a subjective observational basis, both Ely and LTTA show respectively that they have contributed to this positive development by possessing well working access. Yet another significant remark is that both of the networks benefit from second homes, contributing to extending the seasonal length, improving customer and financing larger projects. Tourism attractions in the LTTA area became accessible by the connecting US road to Canada. The road also offers joy and leisure experiences by its exposure along the great Lake Superior. From the perspective of accessibility one might say Ely deserves respect in another sense. Ely has incrementally improved the feeling of getting close to the wilderness by canoe (water accessibility). During summer Ely now grows from 3,500 citizens to 35,000 and hosts approximately 700,000 tourists. The Ely community provides almost everything a canoe tripper may need, and at the end of the mainland various tourism entrepreneurs support trippers about to enter the lakes. Interviews with the policy makers in N. MN confirmed that the networks selected represented the two most successful cases in the Northern Minnesota from a sustainable perspective. The real success could be measured in the amount of tourism facilities (hotels, cottages, condos, canoes, golf clubs, snow mobiles, boats, ski resorts, etcetera) that constitute the basis of increasing investment completed over the last 0-30 years.

After discussions with policy makers and investigating some background information, it was proved that these networks were successful despite trying circumstances. From this point on, it was important to see how the networks were formed. The relationships are not analyzed case by case, but are discussed from a contextual and a quantitative point of view. The networks were surveyed during the spring of 2003 (low season). The data collection was directed to 254 managers in leading positions with a received response rate of 38 %. 134 firms personally received the questionnaire and the rest were either contacted by the chair of the network or by receiving a survey and a pre-stamped envelope.

3.1. Measurements and method of analysis

Likert scales were connected to the questions and utilized to test the hypotheses (see Table 1 for the various questions). The Likert scales were developed in previous studies dealing with similar issues (Geringer, 1993; Volery, 1995; Mavondo & Rodrigo, 2001). As is evident, Cronbach's alphas are acceptable.

Structural equation modeling (SEM) was employed to test the hypotheses. SEM was used in order to confirm theory-deduced constructs, as well as to evaluate if the data fitted the model. It is notable that SEM models are sensitive to sample sizes. Therefore, fit measures not so sensitive to sample size were also reported, since the sample is accordingly a considerable matter to take into account.

4. Findings

When estimating the proposed model and the hypotheses, this study noticed that better models were evident by the modest fit statistics ($\chi^2 = 33,12$, d.f. = 9, $p = 0.00$, NFI = 0.86, IFI = 0.90, CFI = 0.88, $\chi^2/d.f. = 3.68$). Therefore, as the proposed model argued for a stage construction, controlling for possible misspecification bias in the model while searching for a better model, while simultaneously keeping the original model in evaluating the hypotheses with the data. Figure 2 reports the results from the final model including relations that were not a priori hypothesized but yet of significant importance. This model revealed acceptable model fit statistics ($\chi^2 = 19,96$, d.f. = 7, $p = 0.06$, NFI = 0.92, IFI = 0.95, CFI = 0.94, $\chi^2/d.f. = 2.85$). Apparently, the two broken lines, indicating the significant paths evident in the misspecification bias control revealed that hard motives related to relational trust consequences and that soft motives associated to selecting partners that seemed trustful.

Table 1:
Questions and various items in constructs

<i>Construct</i>	<i>Operationalization</i>	<i>Mean</i>	<i>σ</i>	<i>α</i>	<i>Based on</i>	
<i>Motives</i>	<i>Items regarding motives for joining the interfirm network reflect wishes to:</i>					
Hard Cooperative Motives	Obtain cost reduction	2.95	.7	.85	Rosenfeld, 1996; Huggins, 2000	
	Reduce risk					
	Obtain financing					
	Increase ability to enter new geographical markets					
	Increase ability to enter new segments					
	Share risks in specific projects					
Soft Cooperative Motives	Increase sales of a certain product	3.39	.65	.57	Biggiero, 2001; Nonaka, 1994; Rosenfeld, 1996; Pire and Sabel, 1984	
	Increasing sales efficiency					
	Develop existing products					
	Develop new products					
	Gain know-how					
	Gain flexibility					
<i>Partner Selection</i>	<i>Items a potential partners possesses:</i>					
	Trust	Is familiar	4.19	.62	.78	Volery, 1995; Axelrod, 1997
		Expected behavior				
		Behavioral reliance				
		Shared values				
	Cultural Affinity	Importance of sharing a cultural background	3.02	1.12	.79	Axelrod, 1984; Malecki, 1997; Porter, 1998
Importance of sharing a regional identity						
Network Awareness	Clear and shared strategy	3.98	.67	.84	Benassi, 1995; Geringer, 1991	
	Preferences that divide a weight power between us					
	Importance of there being willingness to follow formal agreements					
	Importance of not acting like competitors					
	That each partner contributes financial involvement					
	Ability to provide an independent contribution					
	Same line of business					
	Sharing the ambition to make money					
Different knowledge						
Same risk willingness						
<i>Relational Consequences</i>	<i>Individual items regarding importance of reciprocity, trust and commitment for your own business performance</i>					
	Reciprocity	Calling in favors a part of doing business	2.79	.74	.80	Mavondo and Rodrigo, 2001
The practice of giving and taking						
Feeling a sense of obligation						
Feeling embarrassed, if I am unable to provide requested favor						
The importance of returning favors						
In case of a misunderstanding, I retaliate my partner in kind.						
Trust	The partner is honest and truthful with me	4.28	.83	.92	Mavondo and Rodrigo, 2001	
	I have great confidence in my partner					
	We share mutual trust					
	The partner does not take advantage of our relationship					
	I have not been negatively surprised					
Share values						
<i>Dependent variable</i>						
Interfirm Commitment	Importance of promises to exchange resources	3.01	.69	.79	Gundlach and Achrol, Mentzer, 1995; Birnberg, 1998; Mavondo and Rodrigo, 2001	
	Importance of the contributions of the companies being equal					
	Intentions to allocate more resources					
	Importance of being bounded for future operations					
	Importance of discontinuing search for new partners					
Importance of a rewarding relationship						

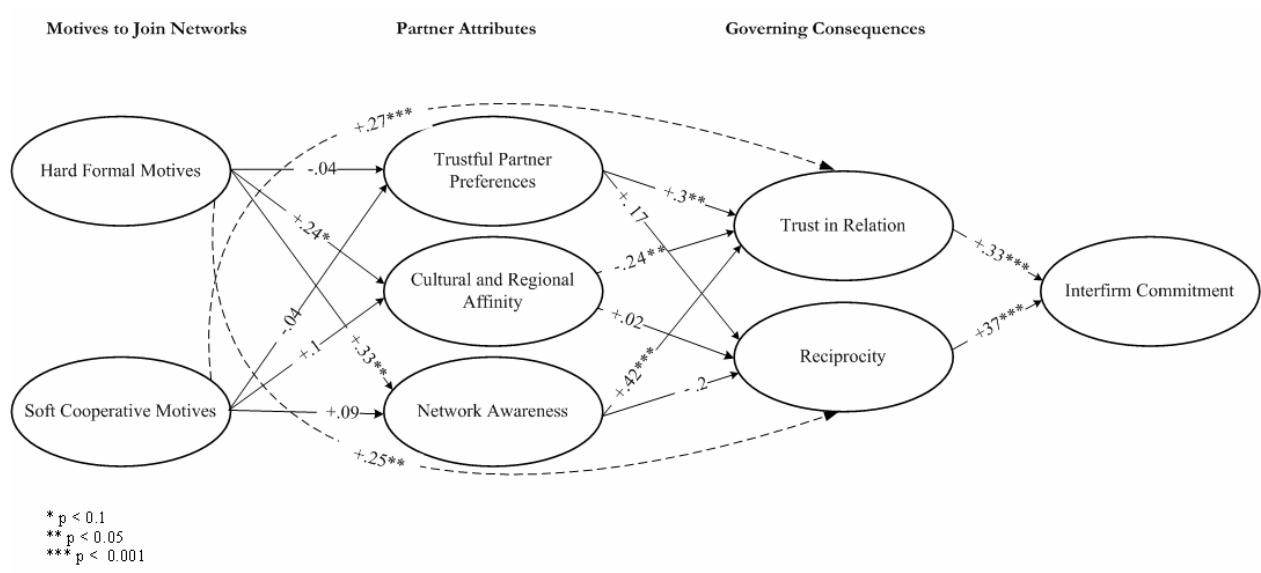


Figure 2. Model Test Including Misspecification Errors

The study notes modest support for proposed hypotheses. Hypothesis 1, stating that firms that join the network on the basis of hard motives also select partners they can trust, was not supported. Nor did managers with soft motives select partners on the basis of trust as proposed in hypothesis 2. Hypothesis 3 revealed that hard motives are associated with the likelihood of selecting partners based on their cultural affiliation ($p < 0.05$), exactly as expected. Hypothesis 4 did not receive support, since soft motives and their relation to cultural affiliation were positive but not strong enough to show any significance. Further, hard motives strongly breed principles for selecting partners based on network awareness ($p < 0.01$) in support of hypothesis 5. Unexpectedly, soft motives and their relationship to network awareness as stated in hypothesis 6, were not positive enough to reach significance. The data confirms hypothesis 7, since having trust in mind when selecting partners also influences how a trustful relationship is developed ($p < 0.05$). Contrary to what was stated in hypothesis 8, having trust in mind in partner selection does not necessarily breed establishment of a reciprocal relation. Having cultural affinity in mind when selecting partners is negatively connected to trust ($p < 0.05$), which is contradictory to hypothesis 9, and is not significant to reciprocity, leaving no support for hypothesis 10. Selecting partners on the basis of network awareness is strongly associated to established trust ($p < 0.01$) in support of hypothesis 11, but is not significant for setting up a reciprocal relation, as suggested in hypothesis 12. However both trust ($p < 0.01$) and reciprocity ($p < 0.01$), strongly breed commitment as posited in hypotheses 13 and 14.

Table 2 illustrates coefficients, significance levels and support/non-support for the hypotheses stated. When looking on the hypotheses, there are some patterns that can be observed regarding support vs. no support for what was expected a priori. As is evident, hard network motives score significantly for partner selection, while not one single relationship between soft network motives and partner selection was evident. Moreover, cultural affinity and network awareness are much better predictors of relational consequences than trust with regard to partner selection criteria.

Table 2:
Hypotheses Interpreted

<u>Hypotheses</u>	<u>Model 1</u> Path coefficients and p-values	<u>Model 2</u> Path coefficients and p-values	<u>Interpretation</u>
H1: In a successful network in a trying context there is likely that the more hard network motives a firm has, the more likely it will be to select partners it can trust.	-.02 (.90)	-.04 (.97)	Not supported
H2: In a successful network in a trying context there is likely that the more soft network motives a firm has, the more likely it will be to select partners it can trust.	-.02 (.87)	-.04 (.74)	Not supported
H3: In a successful network in a trying context there is likely that the more hard network motives a firm has, the more likely it will be to look for aspects of cultural affiliation in potential partners.	.24 (.06)	.24 (.05)	Supported
H4: In a successful network in a trying context there is likely that the more soft informal network motives a firm has, the more likely it will be to look for aspects of cultural affiliation in potential partners.	.10 (.41)	.10 (.39)	Not supported
H5: In a successful network in a trying context there is likely that the more of hard network motives a firm has, the more likely it will be to score high in network awareness when selecting potential partners.	.32 (.01)	.33 (.01)	Supported
H6: In a successful network in a trying context there is likely that the more of soft network motives a firm has, the more likely it will be to score high in network awareness when selecting potential partners.	.10 (.38)	.09 (.45)	Not supported
H7: In a successful network in a trying context there is likely that the more a firm selects partners by having trust in mind, the more likely a trustful relationship will develop.	.24 (.01)	.30 (.01)	Supported
H8: In a successful network in a trying context, there is likely that the more a firm selects partners by having trust in mind, the more likely a reciprocal relationship will develop.	.10 (.44)	.17 (.17)	Not supported
H9: In a successful network in a trying context there is likely that the more a firm selects partners on a cultural affinity basis, the more likely a trustful relationship will develop.	-.21 (.02)	-.24 (.01)	Not supported
H10: In a successful network in a trying context there is likely that the more a firm selects partners on a cultural affinity basis, the more likely a reciprocal relation will develop.	.06 (.60)	.02 (.87)	Not supported
H11: In a successful network in a trying context there is likely that the more a firm selects partners on a strategic network awareness basis, the more likely a trustful relationship will develop.	.53 (.00)	.42 (.00)	Supported
H12: In a successful network in a trying context there is likely that the more a firm selects partners on a strategic network awareness basis, the more likely a reciprocal relation will develop.	.10 (.43)	-.02 (.87)	Not supported
H13: In a successful network in a trying context there is likely that the more trust a relationship is able to establish, the more likely it will also be to succeed in developing interorganizational commitment.	.33 (.00)	.33 (.00)	Supported
H14: In a successful network in a trying context there is likely that the more reciprocity a relationship is able to establish, the more likely it will also be to succeed in developing interorganizational commitment.	.37 (.00)	.37 (.00)	Supported

Model 1 represents original the hypothesized model. Model 2 represents a revised model controlling for misspecification bias. Standardized path coefficients are shown with P-values in brackets. Measurement errors for partner selection and relational consequences are correlated.

5. Conclusion

This paper contributes to general network research on cooperation involvement in successful networks in general and to cooperation involvement in successful networks in trying areas in particular. The proposed model reported modest support for the hypotheses. However, the findings do report a picture of what is going on when building commitment in successful networks in trying contexts. Firms in successful networks in trying contexts have built their commitment on a process starting with hard motives. The study did not receive support for any relationship between soft informal network motives and any of the partner selection factors. This indicates that the actors operating in successful interfirm networks in trying contexts may be even “tougher” than posited in the proposed framework. They do not select partners based on curiosity and network motives that are not clearly known or specified. Instead it seems important to know the reasons for ‘why networking’ and ‘what they should network about’. It may be the case that the trying context makes them even more rational about using resources effectively.

To the general network research on cooperation involvement in successful networks, this paper attempted to link reciprocity, trust and commitment as consequences of deliberate motives and accurate principles for partner selection. As such, it extends contemporary research on motives as well as on partner selection to reveal some interesting insights by synthesizing prior work (see e.g. Geringer, 1991; Parkhe, 1993; Volery, 1995; Wildeman, 1998). It differentiates the contribution from Parkhe (1993), because this study got (although modest) empirical support for a more specified framework for what the processes may look like (i.e. how sequential constructs may be related to each other). Motives can be followed by partner selection, which in turn is related to relational consequences. Ultimately commitment is fostered by the relational consequences. The results also present empirical evidence for Dwyer, Schurr & Oh, (1987) and Wildeman’s (1998) theorizing that commitment solidly explains why networks break up or become successful when going far back in the causal chain to explore how commitment is formed in a successful network.

However this study did not complete the picture of earlier findings, since the link between trust and commitment could not be established (Varamäki, 2001; Ekelund, 2002; Hunt & Morgan 1994). The results rather go to another literature telling that it is important paying with time and effort into a relationship (Gonaris, 2005).

6. Limitations

Some limitations in this study are common to others studying successful interfirm networks. The sampling procedure presented in this paper has some advantages compared to most studies of success. In a conceptual paper of forming networks Parkhe (1993) expresses concern about the lack of both methodological pluralism and methodological foci. Longitudinal studies are necessary to evaluate possible time lags and ultimately test the causality between the proposed constructs presented here. The model may also benefit from adding more constructs to capture dimensions not found in this study. For instance, variables such as families and friendship might help to explain the effects of trust and reciprocity on commitment.

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The Process of Interorganizational Commitment

Ossi Pesämaa

Luleå University of Technology

Home phone: +46 920-225397

Email: ossi.pesmaa@telia.com

Abstract

How does the process of interorganizational commitment develop between tourism firms? This paper describes and tests a model of interorganizational commitment. The model is based on six multi-item constructs with 19 variables. The model is tested on 99 small and medium sized firms in Northern Minnesota. The model receives strong support for nomological, convergent and discriminant validity. The contribution of the paper is related to measurement development as well as identifying a unique sequential order to the process of interorganizational commitment.

Introduction

Considerable research has been conducted on how networks of firms outperform other firms (Gulati, Nohria & Zaheer, 2000; Kogut, 1988). Some of the studies examine managing resources to achieve the network mission as well as how selected activities are contracted to strengthen participating firms and the industry structure (Gulati, Nohria & Zaheer, 2000). Other studies focus on the interorganizational relationships between firms that network (Geringer, 1991), the reasons firms choose to participate in networks (Lavie & Rosenkopf, 2006), and why networking firms perform better (Sampson, 2007; Shipilov, 2007). Few studies examine theoretical models to obtain evidence of how these outcomes occur (Bolland & Wilson, 1994; and Lee, Miranda & Kim, 2004). This paper proposes and tests a theoretical model describing relationships between networking firms, how these relationships develop, and the factors that ultimately lead to organizational commitment and successful networks.

Conceptual Framework

One of the earliest studies of interorganizational networks (Parkhe, 1993) defined networks as consisting of one firm in relation to another firm or a web of firms'. His framework posed that networks involve a process in which forbearance, reciprocity and trust among firms is linked to stability in performance, network joining motives and partner selection. Parkhe's framework is shown in Figure 1.

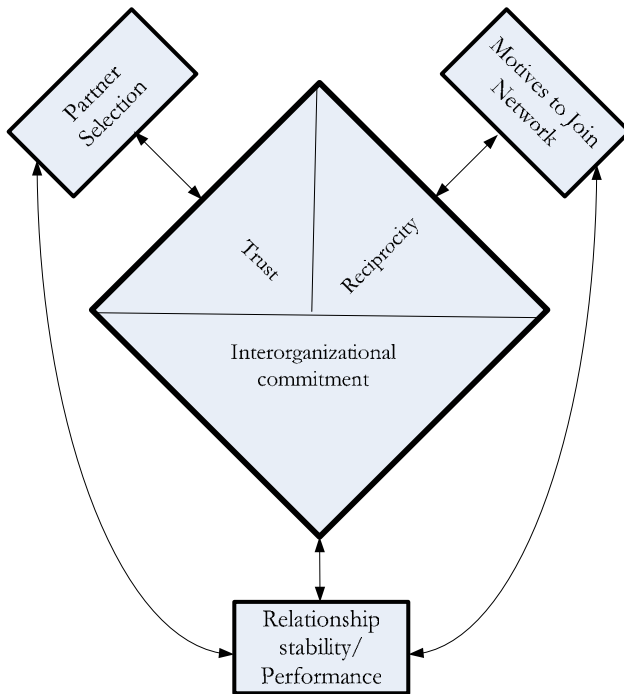


Figure 1: Relationship Diamond

Parkhe (1993) hypothesized that firms exhibit specific motives to enter networks as well as the assumptions of how partners are selected. This paper expands Parkhe’s framework to include commitment (Morgan & Hunt, 1994) and proposes a sequential process that leads to the consequences of trust and reciprocity, and ultimately to interorganizational commitment, as shown in Figure 2. The constructs used to measure this sequential process are shown in Figure 3.

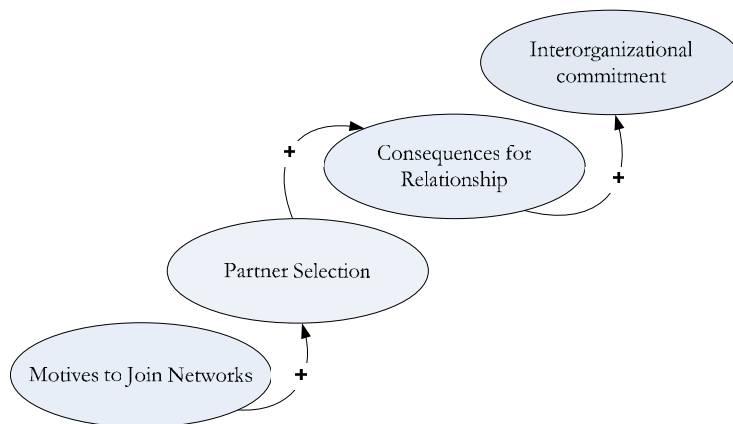


Figure 2: Sequential order of proposed framework

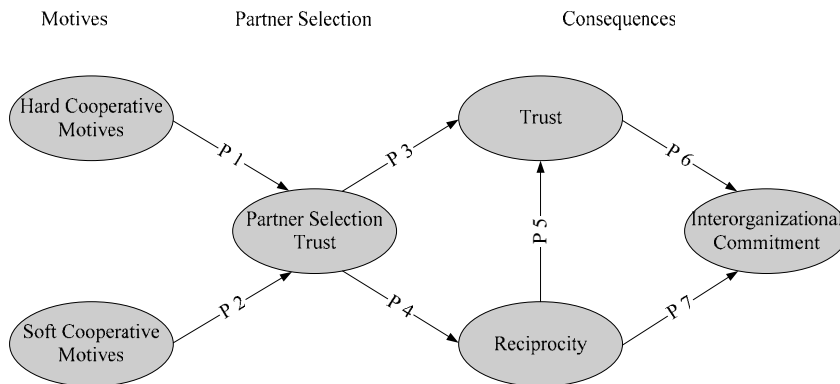


Figure 3: Proposed propositions

Partner selection motives.

Motives reflect the basic need for cooperation to evolve in the first place. Successful firms pursue explicit and conscious motives in their actions and strategies (Edquist, 1997). Two types of motives are considered to be important in selecting partners in tourism networks – hard cooperative motives (HCM) and soft cooperative motives (SCM). HCM for networking include co-production, co-development and co-financing (Rosenfeld, 1996; Huggins, 2000) and represent concrete aspects of the kinds of exchanges firms are seeking in networks. Hard motives also express an embedded ambition to gain control of what should be internally produced or externally supplied, as well as capturing what these firms want to know and specify in advance. Control of costs, development and obtaining financing are bundled in this construct.

SCM are important as well. SCM may involve just becoming familiar with other firms (Huggins, 2000). But they may also represent issues related to business operations, such as learning motives. Learning motives represent the desire to gain know-how, strengthen employee competence, share competences and build a variety of competencies within the network. SCM are assumed to be equally important reasons for forming networks and to also influence how partners are selected (Parkhe, 1993; Volery, 1995; Rosenfeld, 1996; Wildeman, 1998; Huggins, 2000; Gounaris, 2005). In selecting partners, firm generally are searching for specific types of firms. If firms knew in advance where to find a partner with specific knowledge and/or skills, there would be little risk in partner selection. But establishing relationships takes time and effort, has a high likelihood of failure, and is therefore risky (Park & Russo, 1996). Thus, firms have specific motives and assumptions about partners' trustworthiness' when entering networks.

Firms search for partners they can trust based on their HCM and SCM. Partner selection trust (PST) assumes it is important to be familiar with a potential partner (Gulati, 1995) and possess similar norms resulting in an expected behavior (Volery, 1995; Axelrod, 1997). These assumptions lead to the following propositions.

P1: There is a relationship between HCM and PST.

P2: There is a relationship between SCM and PST.

Partner selection and relational consequences.

After selecting partners, firms are likely to experience two types of relational consequences: trust and reciprocity. While firms may select partners with these consequences in mind, this is not the same as actually experiencing these consequences after relationships have been established.

Relational consequences from selecting partners based on trust. Relational consequences of trust (TRU) emerge in several different ways. At the basic level, TRU involves the inherent risk of being in a relationship (Jones, Hesterly & Borgatti, 1997; Jones & Bowie, 1998; Mayer, Davis & Schoorman, 1995). Moreover, trust develops based on the terms of the relationship (i.e. formal/non-formal; performance/just liking each other; Gounaris, 2005). In interfirm partner selection procedures, PST works as a mechanism to exclude risky potential partners that threaten or otherwise jeopardize competitive advantages. As with motives PST is also based on the experiences of cooperating partners (Parkhe, 1993). Shared norms and experiences provide governing principles for overcoming considerations of whether a partner will let one down (maintain TRU) or may follow a give and take approach (reciprocity) in relationships (Axelrod, 1997). The inherent synchronized nature of considering PST suggests the formation of relationships is also based on maintaining trust and reciprocity (Parkhe, 1993). Therefore, if PST is taken into account, it is more likely firms will experience relational consequences of both trust and reciprocity. This will be particularly true in difficult contexts where expectations and contextual boundaries can act as stabilizing forces. In such contexts, what you see is more likely to be what you get; i.e. if partner selection trust is expected it is more likely to be manifested in relationships that are formed. Similarly, what a partnering firm shows while being considered is likely to be what they eventually exhibit in a relationship. Thus, appearing trustworthy likely leads to trusting and reciprocal behavior among partners once selected.

Reciprocity (RCP) is the practice of give and take. RCP is based on norms of exchange in which partners feel obligated to return favors (Mavondo & Rodrigo, 2001). Portes (1998) noted that RCP is crucial for local development. In tourism associated with local destinations, for example, networks perform an important function of coordinating local activities. Activities between hotels, restaurants, bars, ski resorts, camps, and guides must be coordinated and networks are sustained through personal relationships.

Successful relationships require more than RCP. When firms provide favors they expect others to do the same. The role of RCP depends heavily on the context (Portes, 1998), and in some situations immediate returns are necessary, whereas in other contexts reciprocity is based on promises of future returns. RCP involves an individual's cognitive system (i.e., values, ideas and experiences), collecting

information, facts and feelings concerning past exchanges and assigning an expected value to current as well as future decisions. Previous feelings of being treated well that lead to good outcomes have a self-reinforcing effect, creating a belief that relationships lead to positive outcomes. Moreover, RCP often leads to commitment (Kumar, Scheer & Steenkamp, 1995; Mavondo & Rodrigo, 2001). These concepts lead to the following propositions.

P3: Firms that select partners based on trust (PST) are more likely to develop trustworthy relationships (TRU).

P4: Firms that select partners based on trust (PST) are more likely to exhibit reciprocity (RCP) in relationships.

Relational consequences and commitment. (IOC)

Relational consequences of TRU and RCP are antecedents to interorganizational commitment (Portes, 1998). Interorganizational commitment (IOC) is a key element in achieving stability and performance in relationships (Morgan & Hunt, 1994; Mavondo & Rodrigo, 2001). IOC involves partners promising future exchanges of resources as well as intending to allocate more resources and become more operationally integrated in an effort to achieve improved firm performance. Conceptually, IOC is based on stability (Morrow, 1983), and strongly reflects a firm's intention to provide specific resources (Gundlach, Achrol & Mentzer, 1995; Mavondo & Rodrigo, 2001). Prior research shows there is a significant, positive association between TRU, RCP and IOC (Ekelund, 2002; Varamäki, 2001), but that TRU mediates the relationship between RCP and IOC (Kumar, Scheer, & Steenkamp, 1995; Zaheer & Venkatraman, 1995).

TRU is important in maintaining relationships since it implies firms are honest and do not take advantage of other firms in the network (Mavondo & Rodrigo, 2001), which is important in building IOC. Relational trust (TRU) involves honesty and integrity in relationships while reciprocity governs the "rules" of exchange, which include a sense of obligation to return favors as well as a "social" element dictating how exchange partners should be treated. In addition the test is based on these empirical propositions.

P 5: Trust is positively related to reciprocity.

P 6: Trust is positively related to interorganizational commitment.

P 7: Reciprocity is positively related to interorganizational commitment.

Research Method

Research Design

Studying cause and effect where one construct (x) affects another (y) has a long tradition (Bagozzi, 1980). Traditionally hierarchical regression and path analysis were used to measure relationships (Cohen, Cohen, West & Aiken 2002). Today most studies rely on structural equation models (SEM) which enable researchers to

assess measurement characteristics of constructs as well as the existence of causal relationships. In developing and validating theoretical models Hair et al (2006) recommend the use of SEM.

Sample and data collection

This research is based on a sample of tourism firms in Northern Minnesota. In that geographic area 15 local networks of firms compete against other networks of firms. The networks are formally organized and operated on the basis of a 3 percent sales tax. The income from members is used for shared interests such as events, marketing, signs, policies and shared web sites. Data for this paper was collected from the best performing two networks (Ely and Lutsen Tofte Tourism Association), where performance was determined based on sales growth. The research began with a pilot study that confirmed these tourism networks as the most reputable in the area.

A questionnaire was sent to a sample of 254 tourism firms. A total of 99 usable responses were received (response rate = 39%). Approximately 58 percent of the respondents were male and about 83 percent were 41 years or older. The typical responding tourism firm had 27 employees, but the number of employees ranged from one to 450. The types of tourists for the typical firm were 27 percent local tourists, 42 percent regional tourists, 25 percent national tourists, and 6 percent international tourists.

Using Northern Minnesota for sampling has several advantages. One very important advantage is the businesses are located in a remote area. In Northern Minnesota as in other remote areas there are long distances between households, which results in a relatively low economic activity per square kilometer. Long distances are also present between firms. This means long distances to every physical meeting. In a relative sense this results in few companies located close to each other, facilitating a better social control over each others businesses and operations. In Northern Minnesota there used to be many large mining and forest firms. Today a new type of industry is growing around tourism. These new industries demand new service related skills and new types of firm structures, and many small and medium sized firms' operate in service intense industries. In tourism the local product must be focused and in Northern Minnesota the focus is wilderness tourism. There is fishing and boating in the 10,000 lakes, woods full of wild bears and wolves, and a sky full of birds that make this area attractive for wilderness tourism. Many people, especially those from nearby cities, travel there for hunting, fishing, skiing, snowmobiling, boating, canoe safaris, hiking, relaxing, and for silence, fresh air and other wilderness-related leisure activities. These activities also have shared policies in which, for instance, motorboats and canoes are kept separate to prevent conflicts. The tourism resources include large resorts, spas, hotels, restaurants, camps, guides, outfitters, bait and tackle providers, banks, retailers, souvenirs boutiques, different producers of canoes and other producers providing tourists with unique equipment. Virtually all firms are therefore indirectly related to tourism. Indeed, if not for the tourists many area businesses would have problems surviving.

Measurement

As the proposed model suggested, four sequences and a total of six multi-item constructs were examined. The first sequence included soft and hard cooperative motives to join networks. The SCM (soft cooperative motives) construct had four items: (1) gaining knowledge; (2) improving employee skills; (3) sharing employees with other businesses; (4) utilizing a variety of competencies. The HCM (hard cooperative motives) were measured by three items: (1) reducing costs; (2) sharing research and development; (3) and obtaining financing. These two constructs were measured on five-point Likert scales ranging from 1 = Strongly Disagree to 5 = Strongly Agree, and were based on the work of Rosenfeld (1996) and Huggins (2000). The remaining constructs were measured using a 5-point Likert scale that ranged from 1 = Unimportant to 5 = Very Important.

The second sequence measured trust as it relates to partner selection (PST). This trust construct had three items relating to the selection of potential network partners. The items measured the importance in partner selection of (1) familiarity, (2) acting as expected, and (3) sharing the same values. This construct was developed from Volery (1995).

The third sequence assessed consequences and included two constructs – TRU (Trust) and RCP (Reciprocity). The TRU construct consisted of three items that examined the role of trust in achieving firm performance. For this construct, respondents were asked the importance of the partner being: (1) honest, (2) confident, and (3) trustworthy. This operationalization of trust is based on Mavondo and Rodrigo (2001). RCP had three items measuring the importance of the following in achieving firm performance: (1) give and take of favors in relationships between network partner(s), (2) the obligation to do favors for network partners, and (3) the obligation to return favors to network partners. This construct was developed from Mavondo and Rodrigo (2001).

The final construct, interorganizational commitment (IOC), measured the importance of commitment in achieving firm performance. The three items were (1) promising to exchange resources (e.g., cottages, rooms, staff, boats) inside the network, and (2) allocating more resources (e.g., lodging capacity, competent staff, equipment) to network business relationships, and (3) being bound to the network for future operations. This construct was developed from Mavondo and Rodrigo (2001).

Findings

The means and standard deviations are in the appendix. The means show that partner selection trust (PST) and trust as a relationship consequence (TRU) are important ingredients in cooperative networks.

To measure the relationships between the constructs, structural equation modeling was used (Jöreskog & Sörbom, 1979). The analysis of relationships is divided into two sections: the first evaluates the reliability and validity of the constructs, and the second examines the proposed relationships in the theoretical model.

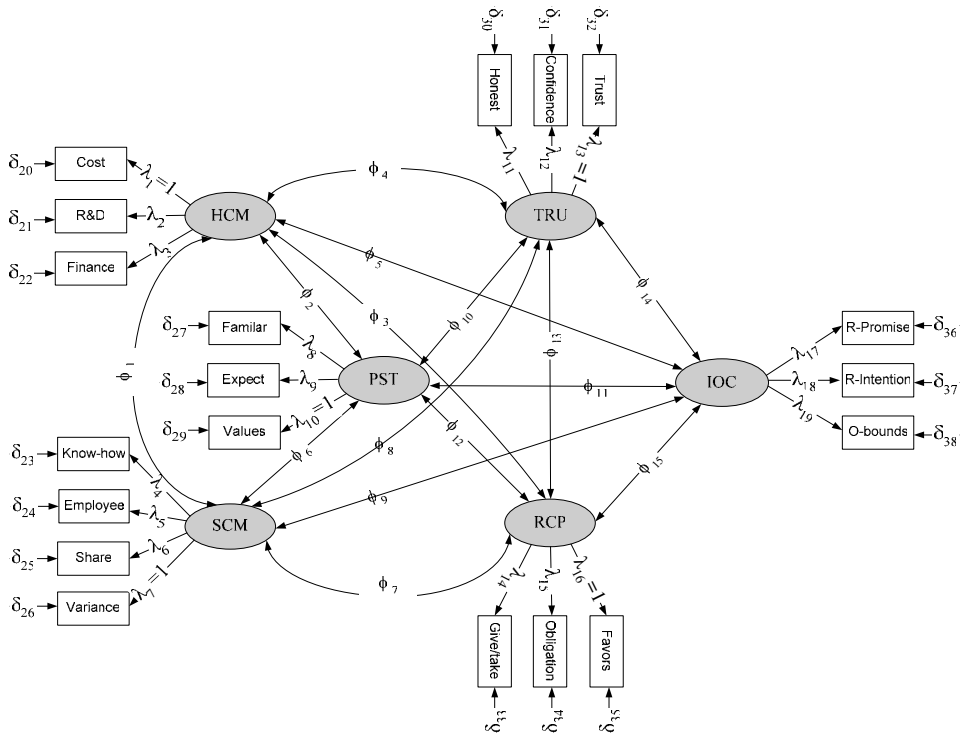


Figure 4: Measurement Model

The overall theoretical model is shown in Figure 4. The results of the goodness of fit measures support the proposed model. The χ^2/DF is lower than the suggested cut off of 5 (Hair et al, 2006). RMSEA, CFI and IFI also are consistent with recommended levels (see Table 3).

Table 1: CFA Goodness-of-Fit

Measure	Measurement	Recommended value	This study
P	Statistical test of the model. χ^2 test if there is difference between expected population and correlation matrix.	Acceptable level $P > .01$	$P = .158$
Chi ² (χ)/Degrees of Freedom (d.f.)	Chi square in relation to degrees of freedom.	Recommended level lower than 4.	2.573
CFI	Comparative Fit Index	CFI acceptable $> .9$.978
IFI	Incremental Fit Index	IFI acceptable $> .9$.979
RMSEA	Root Mean Square Error of Approximation	RMSEA acceptable $< .08$.035

Convergent, nomological and discriminant validity

Further evidence from the measurement model helps to assess the reliability and validity of the model's constructs. Convergent validity is the extent to which the individual items in a construct share variance between them (Hair, et al, 2006). The shared variance estimates exceed the recommended .5 level, while variance extracted (VE) exceeds 50 percent and construct reliability exceeds .7. The positive ϕ 's indicate the empirical data are consistent with theory and confirm nomological validity. Finally, VE exceeds the squared inter-correlation (SIC) associated with each construct, suggesting discriminant validity and indicating the constructs are measuring different concepts (Hair, et al, 2006). Thus, the criteria of convergent, nomological and discriminant validity are met.

Table 2: Findings Measurement Model

Construct	Parameter	Estimate	p-value	Parameter	δ	1- δ	Construct Reliability	VE	IC	Estimate	SIC
HCM	λ_1	.72	N/A	δ_{20}	.52	.48	.76	50%	ϕ_1	.53	.28
	λ_2	.81	.000	δ_{21}	.66	.34			ϕ_2	.00	.00
	λ_3	.62	.000	δ_{22}	.38	.62			ϕ_3	.34	.12
SCM	λ_4	.67	.000	δ_{23}	.45	.55	.80	52%	ϕ_4	.19	.04
	λ_5	.75	.000	δ_{24}	.56	.44			ϕ_5	.49	.24
	λ_6	.57	.000	δ_{25}	.32	.68			ϕ_6	.16	.03
	λ_7	.82	N/A	δ_{26}	.67	.33			ϕ_7	.26	.07
PST	λ_8	.73	.000	δ_{27}	.53	.47	.78	55%	ϕ_8	.38	.14
	λ_9	.89	.000	δ_{28}	.79	.21			ϕ_9	.59	.35
	λ_{10}	.57	N/A	δ_{29}	.32	.68			ϕ_{10}	.54	.29
TRU	λ_{11}	.78	.000	δ_{30}	.61	.39	.90	76%	ϕ_{11}	.14	.02
	λ_{12}	.91	.000	δ_{31}	.83	.17			ϕ_{12}	.01	.00
	λ_{13}	.92	N/A	δ_{32}	.85	.15			ϕ_{13}	.48	.23
RCP	λ_{14}	.75	.000	δ_{33}	.56	.44	.76	51%	ϕ_{14}	.40	.16
	λ_{15}	.71	.000	δ_{34}	.50	.50			ϕ_{15}	.56	.31
	λ_{16}	.69	N/A	δ_{35}	.48	.52					
IOC	λ_{17}	.56	.000	δ_{36}	.31	.69	.77	53%			
	λ_{18}	.89	.000	δ_{37}	.79	.21					
	λ_{19}	.71	N/A	δ_{38}	.50	.50					

EV= Eigenvalue; VE= Variance extracted; IC= intercorrelation; SIC= Squared intercorrelation

Test of sequential model and propositions

The initial sequential model is shown in Figure 5. A competing model with an additional relationship specified is included. We again report individual loadings from the parameters (λ) as well as the relationships between constructs, denoted as γ .

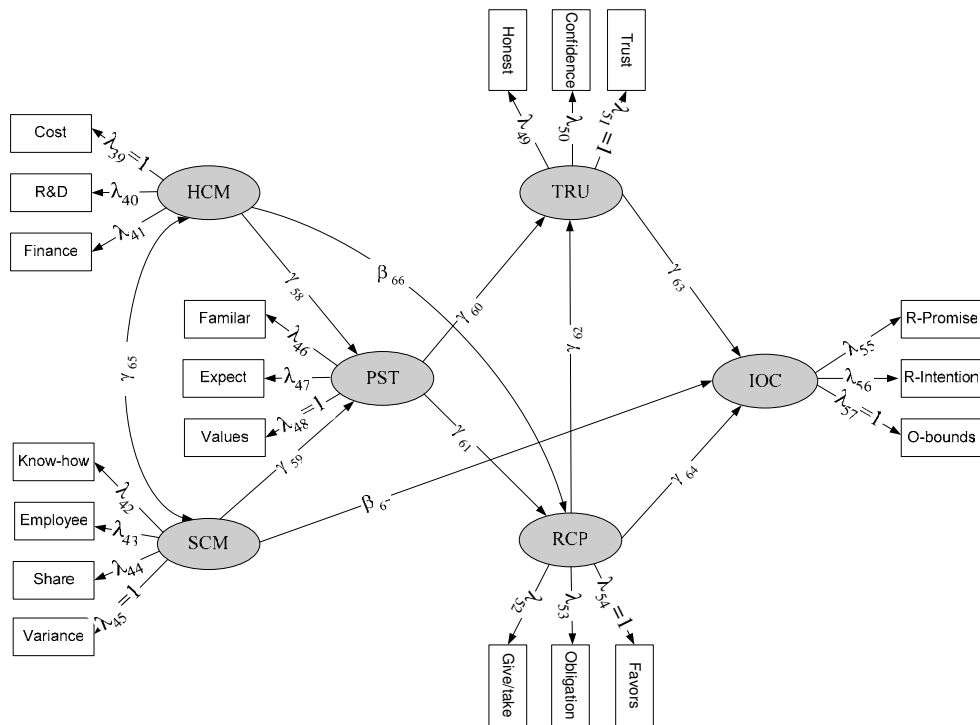


Figure 5: Sequential Model of IOC

Model and competing model

When estimating the proposed model, this study noticed that better models were evident. The first proposed model received acceptable but modest goodness-of-fit statistics ($\chi^2 = 207.95$; d.f. = 145; $P = .000$, IFI = .92, CFI = .992, $\chi^2/d.f. = 1.43$; RMSEA = .067). Therefore, as the proposed model argued for a stage construction, controlling for possible misspecification bias in the model while searching for a better model, while simultaneously keeping the original model in evaluating the propositions with the data. Figure 5 reports the results from the final model including relations that were not a priori proposed but yet of significant importance. This model revealed acceptable model goodness of fit statistics ($\chi^2 = 159.85$; d.f. = 142, $P = .158$, IFI = .98, CFI = .98, $\chi^2/d.f. = 1.12$; RMSEA = .035).

Test of propositions

Before reporting relationships between construct Table 3 show that no significant changes occur within each construct. All loadings are still significant and above .5 level.

Table 3: Findings sequential model

Construct	Parameter	λ	p-value	Parameter	$\gamma - \beta$
HCM	λ_{39}	.72	N/A	γ_{58}	-.14
	λ_{40}	.81	.000	γ_{59}	.27
	λ_{41}	.61	.000	γ_{60}	.536***
SCM	λ_{42}	.67	.000	γ_{61}	.019
	λ_{43}	.76	.000	γ_{62}	.47***
	λ_{44}	.58	.000	γ_{63}	.047
	λ_{45}	.81	N/A	γ_{64}	.43***
PST	λ_{46}	.73	.000	β_{65}	.55***
	λ_{47}	.89	.000	β_{66}	.38***
	λ_{48}	.57	N/A	β_{67}	.47***
TRU	λ_{49}	.78	.000		
	λ_{50}	.92	.000		
	λ_{51}	.91	N/A		
RCP	λ_{52}	.70	.000		
	λ_{53}	.74	.000		
	λ_{54}	.70	N/A		
IOC	λ_{55}	.56	.000		
	λ_{56}	.88	.000		
	λ_{57}	.71	N/A		

p<.05; *p<.01

Next Table 3 (see also Figure 5) indicate that proposed positive relationship between HFM and PST (P1) is insignificant ($\gamma = -.14$; $p > .05$). SCM (P2) show the same pattern having an insignificant relationship PST ($\gamma = .27$; $p < .1$). As expected PST (P3) have a positive and significant relationship to TRU ($\gamma = .536$; $p < .01$). However PST (P4) have no significant effect on RCP ($\gamma = .019$; $p < .05$). As anticipated RCP (P5) have a significant effect on TRU ($\gamma = .47$; $p < .01$). One of the most expected individual propositions was a significant relationship from TRU to IOC (P6). This relationship was positive in a correlation table but in the final regression this relationship vanished ($\gamma = .047$; $p < .05$). The final proposed relationship was from RCP to IOC (P7). This relationship is also significant as expected ($\gamma = .43$; $p < .01$). In finding the optimal model it is obvious that HFM and SCM are interrelated ($\gamma = .55$; $p < .01$). Apparently, this study also have three not predicted relationships. These relationships are denoted with a β . Secondly HFM has a direct effect on RCP ($\gamma = .38$; $p < .01$) and SCM a direct effect on IOC ($\gamma = .47$; $p < .01$).

Discussion

This paper contributes to general network research on cooperation evolvement in successful networks in general and to cooperation evolvement. First the study validates some proposed measurements that underpin development of interorganizational commitment. The depicted measurement model also receives strong support.

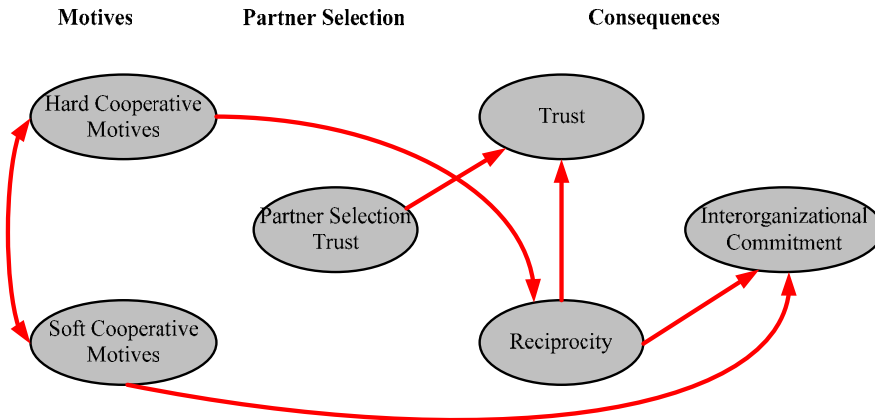


Figure 6: Findings Simplified

Next this paper also contributes to extant research on how interorganizational commitment is formed. Three out of seven propositions were confirmed and three misspecified relationships found. These could be followed in the simplified Figure 6. One of the most surprising results is the insignificant relationship between trust and IOC. A simple bivariate correlation establishes that these constructs are bound together. However, as the model incorporated direct relationships from SCM to IOC and HFM to RCP this effect from trust vanish.

In finding explanations to this simplified figure another thing is interesting to consider. HCM containing reasons to share costs, development and financing have a direct effect on RCP, which basically incorporate that the firm find it important to get something back. Recall, that these firms operated in a peripheral area and bear also in mind they developed a considerable success under the past 20 years. Maybe, success, also stress motives that also want to know they get something back, and after that they can establish trust.

Another interesting implication is that SCM that very much reflected different learning reasons to join the network directly have an effect on IOC. Recall here that IOC not just asked for promises to exchange but also that there was and intention to allocate more resources and bound more operations in future with companies in this network. That said, SCM and learning purposes also stress that there is a long term shared future with the focal firms.

Conclusions

As such, it extends contemporary research on motives as well as on partner selection to reveal some interesting insights by synthesizing prior work (see e.g. Geringer, 1991; Parkhe, 1993; Volery, 1995; Wildeman, 1998). Although being in line with arguments by Parkhe (1993), this study got (although modest) empirical support for a more specified framework for what the processes may look like (i.e. how sequential constructs may be related to each other). Motives can be followed by

partner selection, which in turn is related to relational consequences. Ultimately commitment is fostered by the relational consequences.

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Appendix

Questions used

Item No	Constructs/ items	M	SD.
<i>Hard cooperative motives to enter network (strongly disagree-strongly agree)</i>			
1	Reduce costs	2.93	1.05
2	Share costs of research and development.	2.64	1.01
3	Obtain financing	2.67	1.07
<i>Soft cooperative motives to enter network (strongly disagree-strongly agree)</i>			
1	The main purpose of our network is to gain know-how	3.42	1.04
2	The main purpose of our network is to strengthen the employee's competence in our line of business.	3.18	1.09
3	The main purpose of our network is to share employees in our line of business.	2.31	0.94
4	The main purpose of our network is to identify and utilize a variety of competencies.	3.37	0.98
<i>When you think about a potential collaboration with another business, how important is each of the following aspects of the potential relationship? (unimportant –very important)</i>			
1	I am familiar with the partner	4.36	0.76
2	My partner acts as I expect him/her to do	4.49	0.61
3	H/she shares my values	3.95	0.86
<i>Please assess the importance of trust in the network for your own business performance? (unimportant –very important)</i>			
1	How important is it that my network partner(s) is honest and truthful with me?	4.56	0.88
2	How important is it that I have great confidence in my network partner(s)?	4.38	0.91
3	How important is mutual trust has in developing a relationship with my network partner(s)?	4.45	0.80
<i>Please assess the importance of reciprocity among your network partners for your business performance? (unimportant – very important)</i>			
1	How important is the practice of "give and take" of favors in the relationship between my network partner(s)?	3.20	1.07
2	How important is it I feel a sense of obligation to my network partner (s) for doing me a favor?	3.03	0.97
3	e) How important is it to business to return favors?	3.38	0.95
<i>Please assess the importance of commitment among your network partners for your own business performance? (unimportant –very important)</i>			
1	How important is it that I promise to exchange resources (e.g. cottages, rooms, staff, boats) inside our network?	2.74	1.03
2	How important is it that we intend to allocate more resources (e.g. lodging capacity, competent staff, equipment) to our business relationship within the network?	2.98	0.82
3	How important is it that we are bound to the network for future operations?	2.96	1.08

Additional publications

This thesis appends 10 articles. In addition to these articles the thesis process has generated other related and unrelated research contributions. This project has also received attention occasionally in the local news articles, radio and even television. Some of these related and unrelated literatures are listed below.

Licentiate thesis

Pesämaa, O. (2007a). Hur utvecklar små och medelstora turistföretag interorganisatoriska förbund? En validerad strukturell ekvationsmodell. Licentiate Thesis No 2007:38. (Luleå: Luleå University of Technology).

Publications in books

Pesämaa, O. Öhlins Chemicals: Resolving communication problems. (case in) Hair, J., et.al., *Professional sales management*. Houghton-Mifflin: Boston, forthcoming 2008.

Pesämaa, O. & Bergsten, F. Styrelsearbete., Styrelsehandboken. Bonnier, Stockholm, forthcoming 2008.

Conference accepted on the basis of full article submission

Pesämaa, O. & Wincent, J. (2005). Cooperation evolvment in successful networks in peripheral areas. *65th Annual Meeting of Academy of Management in Hawaii, USA. August 2-5, 2005*.

Pesämaa, O. & Eriksson, P-E. (2006). Coopetition among nature-based tourism firms: Competition at a local level and cooperation at a destination level. *2nd Workshop on Coopetition Strategy, Milan, Italy, September 14-15. 2006*

Conference articles accepted on basis of abstract

Pesämaa, O. (2005). Forming trust, commitment and cooperation under trying circumstances in peripheral tourism networks. (Presented in) *VIII Nordic Scottish Conference Akureyri, Iceland. September 22-25, 2005*.

Conference articles in proceedings

Pesämaa, O., Örtqvist, D. & Hair, J.F. (2007). Is loyalty important for your tourism partner? Examining the gap between expected and experienced trust and its effect on loyalty. (in conference proceedings). *The International Symposium on Entrepreneurship in Tourism, Rovaniemi, Finland, March 19-22, 2007. 212-231*.

- Pesämaa, O. (2005). Successful cooperation under trying circumstances. (in CD conference proceedings). *EIASM third workshop on trust within and between organizations, Vrije University, Netherlands. October 27-28, 2005.*
- Pesämaa, O. & Skurla, J. (2003). Secret ties as a way to succeed: describing and exploring relations among successful tourism managers. (in CD conference proceedings). *Perspectives on tourism in nordic and other peripheral areas, Umeå, Sweden 21-24 August 2003.*
- Pesämaa, O. & Goel, S. (2003). Advancing research on interfirm networks: reconciling paradoxes via conceptual clarity and bridging methodological pluralism. (in CD conference proceedings). *The 17th Scandinavian Academy of Management Conference, Reykjavik, Island. August 14-16, 2003.*
- Pesämaa, O. & Goel, S. (2003). Relative determinants of success in interfirm networks. (in CD conference proceedings). *The 17th Scandinavian Academy of Management Conference, Reykjavik, Island. August 14-16, 2003.*

Reports and working papers

- Pesämaa, O., Hair, J. F., Klefsjö, B. & Örtqvist, D. (2007). Developing a thermometer measuring tourist's needs, expectations and experiences: An empirical study of visitors in Norrbotten. Research report No 2007:3. (Luleå University of Technology: Quality & Environmental Management).
- Pesämaa, O. (2004). Evaluating prerequisites to collaborative strategic decisions: A simulated scenario of two actors. Working paper No 2004:58. (Luleå University of Technology, Division of Industrial Organization).
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In popular Magazines and reports

- HFÖN i samarbete med JOB Reklambyrå. (2007). Samverkan inom turismen ökar konkurrenskraften. (in). FÖN Forskarstation Östra Norrbotten: Beträktelser, lärdomar och slutsatser. (Luleå: Luleå Grafiska).

Ohlsson, H. O. (2006). Viktigt att någon styr utvecklingen, Interview Ossi Pesämaa. (in). Heart of Lapland (Luleå: Tryckpoolen).

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