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Master Thesis

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Contracting Capabilities

How can contracting capabilities be measured and developed,
and how do they impact firm performance in B2B
relationships?

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Abstract

This master thesis builds on previous research by Argyres and Mayer (2007). They argue that a firm's ability and capacity to perform tasks related to contractual work can be defined as contracting capabilities. These capabilities are a competitive advantage for firms and can enhance their performance.

To my knowledge, no empirical studies on contracting capabilities are conducted with an attempt to measure a firm's contracting capabilities. Research on how contracting capabilities can be developed is also limited. I therefore aim to fill this gap by investigating how contracting capabilities can be measured and developed. I also seek to examine the impact firm characteristics have on companies level of contracting capabilities. Additionally, I will investigate how contracting capabilities influence firm performance.

This study has a quantitative approach in which key respondents were located by phone. The key respondents received an online questionnaire. Out of 147 Norwegian based export companies that agreed to participate in the study, I received 76 responses.

The results show that contracting capabilities can be measured along four dimensions; term specification and writing, contract adaptation, internal organizing and relationship development and maintenance. Experience is positively associated with firms' contracting capabilities. Contrary to my predictions, resource slack, age of firm, size of firm, internal consult, external consult and training shows no significant relationship with contracting capabilities.

Out of the four identified dimensions of contracting capabilities, the results show a positive relationship between internal organizing and firm performance. The other dimensions do not receive support. Depending on the way firms adapt their contractual activities to their organization and allocate human resources, contracting capabilities can be developed and enhance companies' performance.

Abbreviations

This page provides a summary of the abbreviations applied in this thesis. Most of them are related to construct measurements and statistical terms.

ADCC:	Contract adaptation
AGE:	Age of firm
AVE:	Average variance extracted
CFA:	Confirmatory factor analysis
CFI:	Comparative fit index
CPER:	Customer export performance
CR:	Construct reliability
EC:	External consult
EPER:	Economic export performance
EXP:	Experience
FICC:	Internal organizing
IC:	Internal consult
RECC:	Relationship development and maintenance
RES:	Resource slack
RMSEA:	Root mean square error of approximation
SIZE:	Size of firm
SKCC:	Term specification and writing
TCE:	Transaction cost economics
TRAIN:	Training

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1. Introduction

Companies operate in a continuously more globalized world and engage in trade relationships across cultures and nation borders like never before (Brown and Eisenhardt 1998). Independent of the geographical dispersion of firms' activities, they are still subject to a changing business environment with increased competition and risk. Consequently, firms face new requirements to succeed with their activities and transactions.

Transaction costs economics (TCE) is central in academic circles with its perspective for understanding business-to-business relationships (Sande and Haugland 2013). This theory predicts that firms are exposed to potential harmful hazards when they engage in trade relationships (Mooi and Ghosh 2010). Most attention is given to hazards related to hold-up problems with relationship specific investments, uncertainty, and measurement ambiguity (Poppo and Zenger 2002; Williamson 1985; Anderson and Gatignon 1986; Ghosh and John 1999; Klein, Crawford and Alchian 1978). Firms seek to avoid such situations. The primary recommendation derived from TCE is to apply governance mechanisms to safeguard against these hazards (Mooi and Ghosh 2010).

Formal contracts can be applied to govern relationships with transaction partners (Mooi and Ghosh 2010; Lusch and Brown 1996). They are legally binding and enforceable agreements between two or more parties, and have to be voluntary and deliberate by the partners (Masten 1999). Formal contracts function as a value adding mechanism by reducing risk and uncertainty in exchange relationships (Lusch and Brown 1996).

Problems related to transactions can be mitigated through the use of formal contracts. Problems are prevented because roles, responsibilities, terms and conditions established in a written contract prior to the transaction. This implies that obligations are made during contract negotiations and are legally binding. This can reduce misunderstandings and prevent the counterparty from acting opportunistically (Wathne and Heide 2000). Further, formal contracts are

protective because contingency planning and dispute resolution clauses provide security in case of contractual breaches.

In this thesis I build on previous research by Argyres and Mayer (2007) on how formal written contracts can be managed to enhance business performance. The authors define contracting capabilities as a firms' ability and capacity to perform certain tasks related to designing formal contracts, and aligning contract terms with transaction attributes. They further suggest that allocating resources with the appropriate knowledge to the right contracting term is key in the contracting process (Argyres and Mayer 2007). The basis of the article is a related paper by Mayer and Argyres (2004), who find that contracting is a learning process and a way to manage inter-firm relationships over time.

Although I agree with the definition suggested by Argyres and Mayer (2007), I still find it insufficient to describe the full extent of this concept. I argue that contracting capabilities involves more than just the design of contracts, but contracting as a process e.g. negotiation of contract terms (Weber and Mayer 2005) and contract enforcement (Rigault 2010). I wish to supplement the definition by Argyres and Mayer (2007) with the inclusion of activities related to the contracting process as a whole. I therefore propose my own definition of contracting capabilities as:

“a firms ability and capacity to perform tasks and activities related to negotiating, writing, and enforcing formal written contracts, with the objective of governing their resources and transactions to enhance relationship performance.”

The concept of contracting capabilities is discussed in the contracting literature. However, it still remains relatively unexplored. To my knowledge, no empirical studies are conducted on contracting capabilities in a broader sense with an attempt to measure a firms contracting capabilities or research how they can be developed. This implies that no measures on contracting capabilities are currently available.

I was also unable to find empirical examination of how firm characteristics influence contracting capabilities, as the literature focuses on transaction attributes. The performance implications of contracting capabilities are perceived to be positive, but this relationship is not empirically tested. I argue that the topic of contracting capabilities deserves attention. Especially based on the significance of its implications and the large extent of firms it affects. In this master thesis I will therefore further explore this construct. This leads me to my problem statement.

1.1. Problem Statement and Research Questions

In this master thesis I seek to contribute to the contracting literature by investigating some aspects of contracting capabilities. I have formulated the following problem statement:

How can contracting capabilities be measured and developed, and how do they impact firm performance in B2B relationships?

This has led me to the formulation of four research questions:

- | | |
|-----------------------------|---|
| Research Question 1: | How can contracting capabilities be measured? |
| Research Question 2: | How can firms develop contracting capabilities? |
| Research Question 3: | How does firm characteristics influence companies contracting capabilities? |
| Research Question 4: | How does contracting capabilities influence firm performance in business-to-business relationships? |

By investigating these relationships I attempt to identify what tasks and activities firms need to manage to develop contracting capabilities. I also attempt to investigate if firm characteristics influence companies contracting capabilities. Finally, I seek to investigate if contracting capabilities enhance firm performance. Since these relationships have not been examined before, this thesis provides new insight to an important aspect of transaction and relationship governance. The results are also useful for further development of contractual work.

1.2. The Research Model

To answer the research questions I have developed a research model (figure 1.1). The model is based on an extension of existing research on contracting capabilities (Argyres and Mayer 2007; Mayer and Argyres 2004; Weber and Mayer 2005).

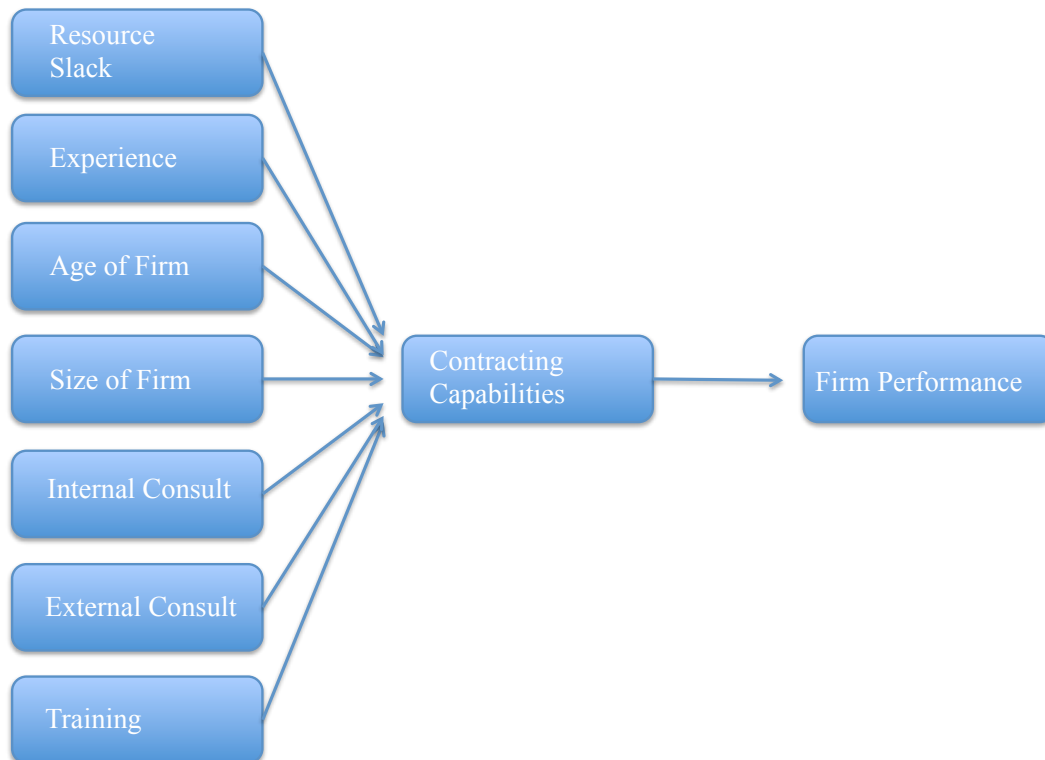


Figure 1.1: The Research Model

I want to examine the relationship between some firm characteristics as control variables and contracting capabilities. The firm characteristics applied in this thesis are: resource slack, experience, age of firm, size of firm, internal consult, external consult and training. Further, I want to analyze the relationship between contracting capabilities as an independent variable and firm performance as the dependent variable. The latter measured as economic export performance and customer export performance.

The rest of this thesis is organized as follows: First, I will provide a theoretical background of formal contracts and agreements. Thereafter, three antecedents to formal contracts are presented, namely relationship specific investments, uncertainty and measurement ambiguity. This is followed by a theoretical discussion of contracting capabilities and research hypotheses. A description of the methods used is provided prior to conducting a confirmatory factor analysis and regression analysis. Results are then presented and answers to research questions discussed. Last, I will provide some theoretical contributions and managerial implications, limitations, and suggestions for future research.

2. Theoretical Background

In this chapter the theoretical background for the master thesis is provided. First, I will examine different perspectives on formal contracts. Thereafter, a presentation is given of antecedents to formal contracts and contractual hazards that can affect the contractual outcome. Last, contracting capabilities and associated dimensions are discussed.

2.1. Formal Contracts

In this section I will define formal contracts and present the rational companies have for entering formal written contracts. I will discuss the relationship between formal contracts and trust, types of contracts and the role of formal contracts for firms. Finally, I present some dimensions included in most written contracts.

“Formal contracts represent promises or obligations to perform particular actions in the future” (Macneil 1978). “A contract, at its most basic level, is a legally enforceable agreement” (Masten 1999, 25). More specifically, it is a legally binding and enforceable agreement between two or more parties and has to be voluntarily and deliberate by the partners (Masten 1999).

Contracts are usually written, and set to project into the future. They thus function as a governance mechanism used for transactions and in exchange relationships to reduce risk and uncertainty firms may encounter (Lusch and Brown 1996; Mooi and Ghosh 2010).

The basic motivation for companies to enter into contracts is to secure commitment to the relationship from the different parties (Masten 1999). Without this commitment firms may be reluctant to make investments or adjust their operations to realize the full value of exchange. In addition to commitment, three other factors are perceived to motivate firms to apply formal contracts in exchange relationships; risk transfer, incentive alignment and transaction cost economizing. Masten (1999) The design and interpretation of formal contracts depend on which of these three motives dominates.

By formalizing relationships through contracting, risk can be transferred to the more risk adverse partner. It can also ensure that the partners have the same incentives to maximize common interests (Masten 1999). The general understanding of transaction cost economics (TCE) is that the characteristics of transactions translate into exchange hazards (Mellewigt, Madhok and Weibel 2007). An exchange hazard is a potential threat that could damage or interrupt transactions and relationships. When these hazards increase so must contractual safeguards (Williamson 1985; Klein, Crawford and Alchian 1978; Poppo and Zenger 2002).

A more complex contract often includes several specifications of promises and obligations (Poppo and Zenger 2002). This often includes details on roles and responsibilities, delivery- and payment terms, penalties for non-compliance, monitoring procedures, information sharing, and performance outcomes (Poppo and Zenger 2002). Complex contracts can thus minimize performance losses and costs arising from exchange hazards (Macneil 1978; Heide 1994; Poppo and Zenger 2002).

On the other hand, contracting can be an expensive process and the associated costs will often increase with the level of complexity. Firms only enter into contracts and undertake associated costs if the consequences of contractual breach are considerable (Poppo and Zenger 2002). The detail level and complexity of contracts are therefore determined by the cost of governance and the possibilities of opportunistic behavior (Mooi and Ghosh 2010). In other words, firms face a trade-off between ex-ante setup and design costs, and ex-post costs related to contractual breach (Mooi and Ghosh 2010).

The main goal for firms when designing contracts lies in aligning details and specifications to transaction attributes, thus to reach the optimal level of safeguarding (Mooi and Ghosh 2010). This ability is viewed as a competitive advantage for firms (Argyres and Mayer 2007; Weber and Mayer 2005). This is also in line with TCE, which emphasizes the influence transaction characteristics have on governance decisions (Argyres and Mayer 2007; Mayer and Salomon 2006).

2.1.1. Formal Contracts and Trust

A question in the choice of whether to establish a contract is if formal contracting is the only option to govern transactions. Williamson (1996) argues that complete contracts do not exist due to bounded rationality. Simon (1957, 198 in Williamson 1996, 36) defines the principle of bounded rationality as follows: “The capacity of the human mind for formulating and solving complex problems is very small compared with the size of the problems whose solution is required for objectively rational behavior in the real world”. In other words, the human mind is rational, but limited so (Williamson 1996). Because of this, not all contingencies can be foreseen so contracts are unavoidable incomplete (Williamson 1996). This emphasizes the need for additional mechanisms to govern transactions and relationships.

Relational governance based on trust and commitment is an alternative. “Relational trust is the perceived ability and willingness of the other party to behave in ways that considers the interests of both parties in the relationships” (Selnes and Sallis 2003, 84). In many cases, the role of trust in relationships is perceived to reduce the need for complex detailed contracts (Mellewigt, Madhok and Weibel 2007).

In the literature, however, there seems to be lacking a consensus of the relationship between trust and formal contracts. Several authors have discussed whether trust and relational mechanisms work as *substitutes* (Macaulay 1963; Gulati 1995) or *complements* (Poppo and Zenger 2002; Uzzi 1997) to formal contracting.

In the first case, with formal contracts and trust as substitutes, partners see introduction of formal contracts as a lack of trust and damaging to the relationship. Contracts are also viewed as unnecessary if the parties trust each other as they already expect that the other will perform its obligations (Mayer and Argyres 2004; Malhotra and Murnighan 2002).

In the second case, with formal contracts and trust as complements, the situation is viewed differently. Formal contracts can enhance trust as they represent

commitment to the relationship (Mayer and Argyres 2004; Poppo and Zenger 2002). Further, Mellewigt, Madhok and Weibel (2007) argue that some of the clauses in formal contracts such as monitoring and information sharing increases the transparency in the relationship, and therefore enhance trust.

Although relying entirely on trust might be satisfactory in exchange relationships when trust is established, one can argue that the situation is different when partners are new to each other. Companies should not undermine potential hazards that might interrupt exchange relationships before trust is established. The role of formal contracts is thus emphasized. A view reflected in this thesis.

2.1.2. Types of Contracts

One can distinguish between two types of contracts, explicit or implicit (Lusch and Brown 1996). Explicit agreements identify exchange partners and formalize a set of terms. They are the foundation of formal contracts (Sande 2007; MacLeod and Malcomson 1989), and enforceable by the court of law (Masten 1999). Implicit contracts are normative and identify a set of mutual expectations and understanding of the relationship (Lusch and Brown 1996). In this thesis, I examine the role of explicit contracts as governance mechanism.

2.1.3. The Role of Formal Contracts

Formal contracts have different functions for firms. In general, they can be valuable in structuring and providing guidelines for exchange relationships. Formal contracts are part of a broader group of organizational tools and functions as a strategic choice variable (Ryall and Sampson 2009). The implications on performance are direct and receive consensus among scholars (Argyres and Mayer 2007; Mayer and Argyres 2004; Mayer and Salomon 2006; Mooi and Ghosh 2010).

The applicability of formal contracts is two-folded. First, formal contracts can be preventative. They can be used as a planning tool to extract as much out of the relationship as possible and plan for contingencies. Secondly, formal contracts

can be protective because they help mitigate problems in case of unforeseen events, disagreements, contractual breach or dispute resolution (Argyres and Mayer 2007).

2.1.4. Dimensions of Formal Contracts

Contracts may contain different terms defined by the exchange partners (for a review see Shelanski and Klein 1995). Still, some dimensions are included in the majority of formal written contracts (Sande and Haugland 2011). In this thesis I will discuss roles and responsibilities, communication and information sharing, contingency planning, and dispute resolution. The dimensions are presented in the next sections.

2.1.4.1. Roles and Responsibilities

Roles and responsibilities are a significant part of any written agreement (Rigault 2010). Role specification is acknowledged as one of the core dimensions in formal contracts (Sande and Haugland 2011; Argyres and Mayer 2007; Lusch and Brown 1996; Ryall and Sampson 2009). This dimension includes which parties are involved, allocation of authority and decision making rights, the responsibilities of the parties, and what actions to be performed.

When the partners agree and formalize responsibilities they are more likely to fulfill them. (Wathne and Heide 2000; Argyres and Mayer 2007) Crafting more detailed clauses regarding role specification might thus reduce potential misunderstandings and prevent ambiguity about contractual obligations. Formalizing role specification may also be valuable as reference or documentation in a conflict situation, if one of the parties does not comply with pre-agreed terms.

Firms need to decide how specified terms regarding roles and responsibilities should be. A higher level of detail is more protective, but can result in lengthy negotiations and inhibit flexibility in a contract (Ghoshal and Moran 1996). Argyres and Mayer (2007) argue that specifications should be adapted to characteristics of the transaction and relationship between the parties. Bilateral

dependency, increased complexity of contracts and lack of monitoring abilities are associated with more extensive description of roles and responsibilities. (Argyres and Mayer 2007) Determining the right level of detail is challenging, but can also enhance contractual performance.

2.1.4.2. Communication and Information Sharing

Communication and information sharing clauses is set to determine how the parties plan to communicate with each other during the transaction. These clauses can be vital to execute successful contracts (Argyres and Mayer 2007), and for the functioning of relationships (Williamson 1991).

A study by Mayer and Argyres (2004) shows that as firms develop their experience with contracts, they include more specifications on who are responsible for providing partners with information, and in what form. An example is regarding product changes. Alterations in product specifications should e.g. come from head engineer on the project to prevent that several employees on a project make claims to alter specification without communicating with each other.

International trades are often more complicated. Differences in communication routines, technology, languages and time zones may call for different communication styles between partners. The main goal is to ensure satisfactory information exchange, thus differences amongst companies should be taken into account when specifying communication clauses.

2.1.4.3. Contingency Planning

Contingency planning is a way to look into the future and predict possible outcomes of a situation in order to prevent undesired results. It “involves anticipating and making provisions for problems that may or may not occur during the execution of the project” (Argyres and Mayer 2007, 1069). Contingency planning is used as a tool by firms to reduce risk of a transaction or relationship, which often results in written contract terms.

All possible contingencies can however never be predicted (Williamson 1975; 1985; 1996; Grossman and Hart 1986; Macneil 1980). When designing and negotiating contracts, agents are “unable to anticipate all future contingencies that could affect the contractual relationship” (Mayer and Argyres 2004, 396). Companies are however able to foresee major hazards in the exchange relationship and devise contractual structures to mitigate them (Mayer and Argyres 2004). Hence the goal is not to predict every outcome, but to foresee major threats and protect against them.

Contingency planning is costly, time consuming and requires dedicated resources. Too much time spent on planning for unforeseen events can slow down the negotiation process. It can also give firms a bad reputation of being too bureaucratic, and be harmful to business relationships. (Argyres and Mayer 2007; Mayer and Argyres 2004) Therefore, firms need to balance their efforts in a situation where both “too much and too little” planning has negative consequences. Some scholars argue that this is a learning process for firms, where experience and previous encountered problems form the foundation for new specifications in contracts (Argyres and Mayer 2007; Mayer and Argyres 2004; Ryall and Sampson 2009).

2.1.4.4. Dispute Resolution

Despite firms planning and protecting efforts, they sometimes find themselves in an unfortunate situation where their partner have not fulfilled their obligations or has acted in ways of self-interest. This can be at the cost of the relationship, with disagreement or conflict as a consequence. A dimension in contracts is often included for such situations (Argyres and Mayer 2007). Dispute resolution is set to mitigate problems that have already occurred, and often involves determining applicable law, jurisdiction and arbitration clauses (Rigault 2010). Lawyers are central for the firm in this process because of their in-depth knowledge about legal systems and dispute clauses in contracts (Argyres and Mayer 2007; Weber and Mayer 2005).

2.2. Antecedents to formal contracting

Transaction cost economics is central in academic circles with its perspectives for understanding business-to-business relationships (Sande and Haugland 2011). The literature identifies three traits or antecedents to formal contracting, namely; asset specificity, uncertainty and measurement ambiguity (Poppo and Zenger 2002; Williamson 1985; Anderson and Gatignon 1986; Ghosh and John 1999; Klein, Crawford and Alchian 1978). The antecedents to formal contracting will now be discussed further.

2.2.1. Asset specificity

Transaction specific investments occur when a transaction requires dedicated investments in physical or human capital (Poppo and Zenger 2002). The concept is widely discussed in the literature, and many descriptions are provided. In this thesis I follow Williamson's (1985, 55) definition of asset specificity as: "...durable investments that are undertaken in support of particular transactions, the opportunity cost of which is much lower in best alternative uses or by alternative users should the original transaction be prematurely terminated." Firms are motivated to make such investments, because it can enhance their rewards of transactions and relationships (Selnes and Sallis 2003).

Since these investments have significantly lower value outside the relationships, they pose as a risk for firms. The risk is related to hold-up situations where the partner not making the investment is in a position of power and leverage. Partner firms can act opportunistically, attempt renegotiations to improve their terms and conditions, or threaten to leave the relationship (Sloof 2008; Ellingsen and Johannesson 2004).

Firms apply formal contracts to govern transactions and relationships against risks related to hold-up situations (Argyres and Mayer 2007; Poppo and Zenger 2002). In practice, this implies specifying and formalizing required actions, consequences of contractual breach, and penalties for premature termination in a contract. (Poppo and Zenger 2002) By safeguarding their investments, firms can feel more secure dedicating- and customizing resources specific to relationships.

The more an investment is customized to a transaction or relationship, the greater the asset specificity and related risk (Anderson and Schmittlein 1984; Mooi and Ghosh 2010). Asset specificity thus increases the complexity of contracts (Poppo and Zenger 2002).

2.2.2. Environmental Uncertainty

Noordewier, John and Nevin (1990, 82) define environmental uncertainty as “unanticipated changes in circumstances surrounding an exchange.” It relates to forces in the environment that firms have little or no control over. These forces, however, have a large impact on performance in relationships (Selnes and Sallis 2003).

The rationale behind this concept is that when transaction environments are more uncertain, there are a greater number of contingencies that could disturb relationships (Williamson 1975; 1985). Firms are often unable to assign probability of something happening in the future and predict outcomes (Milliken 1987). This challenges companies to adapt to problems seeming from unforeseen events (Poppo and Zenger 2002). Environmental uncertainty is a motivation for firms to apply formal contracts for their transaction, thus creating value by reducing uncertainty (Mooi and Ghosh 2010).

2.2.3. Measurement Ambiguity

Exchange partners' contribution to relationships can be hard to measure, and affects the observability of transactional exchange outcomes (Holmstrom 1979). Difficulties measuring performance is viewed as an exchange hazard for firms (Mayer and Salomon 2006; Mooi and Ghosh 2010; Poppo and Zenger 2002). Mooi and Ghosh (2010, 108) define measurement ambiguity as “the difficulty of defining ex ante and verifying ex post the products procured in the contract.”

When contractual performance is difficult to measure, parties to the contract have incentives to limit their efforts towards fulfilling the agreement (Mooi and Ghosh 2010; Poppo and Zenger 2002; Alchian and Demsetz 1972). This gives root to opportunistic behavior and performance ambiguity, and can affect the

companies' overall performance (Poppo and Zenger 2002). Firms are left with the option of either accepting lower performance or dedicate resources to performance measurement and monitoring. Consequently, more complex contracts are often drafted to specify delivered service levels and facilitate monitoring (Poppo and Zenger 2002).

2.3. Contracting Capabilities

In this chapter I will discuss how contracting can be a capability of firms, the concept contracting capabilities, and some dimensions of contracting capabilities.

2.3.1. Contracting as a Capability of Firms

Lu et al. (2010) argue that a firm can only develop and sustain its competitive advantage if they can create an idiosyncratic pool of resources. Barney (1991) defines resources as: firm assets, capabilities, processes, attributes, information, and knowledge.

The relationship between resources and capabilities is widely discussed in the literature. Teece, Pisano and Shuen (1997) argue that “sustainable competitive advantage involves not only what assets a firm own but also how the firm integrates and transforms such assets through appropriate capabilities, since capabilities is difficult to acquire and imitate” (Teece, Pisano and Shuen 1997 in Lu et al. 2010, 421). Capabilities are viewed as “intermediate goods generated by the firm to enhance productivity of its resources” (Amit and Schoemaker 1993, 35).

One can view capabilities at different levels in the firm, and several types of capabilities can be distinguished (Eisenhardt and Martin 2000). Based on the definition provided by Amit and Schoemaker above (1993), management of formal contracts is a capability of companies when these firms exploit their resources to enhance contractual performance. Contracting capabilities are therefore suggested as a capability of firms. The concept of contracting capabilities will be further elaborated on in the next sections of this thesis.

2.3.2. The Concept of Contracting Capabilities

In this thesis I build on an article by Argyres and Mayer (2007) about “Contract design as a firm capability: an integration of learning and transaction cost perspectives.” Argyres and Mayer (2007) are so far the biggest contributors on this topic with their managerial perspective on capabilities for designing detailed commercial contracts. They define contracting capabilities as a firm’s ability and capacity to perform certain tasks related to designing formal contracts and aligning contract terms with transaction attributes.

Although I agree with the definition suggested by Argyres and Mayer (2007), I still find it insufficient to portray the full extent of this concept. It seems more like a description than a definition, and a bit vague. My argument is that contracting capabilities involves more than just the design of contracts. Argyres and Mayer (2007) support that contracting capabilities involves more than just design of contracts and have stated that their narrow view on contracting capabilities is a limitation of their research.

The entire contracting process should be acknowledged, as contracting capabilities also concerns the preparation and follow-up of formal written contracts. Weber and Mayer (2005) support the importance of negotiation skills as a contract capability, and Rigault (2010) argue the significance of contract enforcement. I therefore elaborate on the definition by Argyres and Mayer (2007), and propose my own definition of contracting capabilities as:

“...a firms ability and capacity to perform tasks and activities related to negotiating, writing, and enforcing formal written contracts, with the objective of governing their resources and transactions to enhance relationship performance.”

Argyres and Mayer (2007) argue that successful management of formal written contracts can enhance performance and be a source of advantage for firms. They further suggest that adapting contracts to transaction attributes and allocating resources with the appropriate knowledge to the right contracting term is key in this process (Argyres and Mayer 2007). The basis of the article is a related paper

by Mayer and Argyres (2004), where they find that contracting is a learning process and a way to manage inter-firm relationships over time.

Apart from the two papers mentioned above, the concept contracting capabilities remains relatively unexplored. To my knowledge, no empirical studies are conducted on contracting capabilities with an attempt to measure a firms contracting capabilities or research how they can be developed.

Weber and Mayer (2005) provide a framework for building contracting capabilities. However, the framework is not based on empirical investigation. Several other studies also examine how firms learn to contract (Ryall and Sampson 2009; Mooi and Ghosh 2010; Masten 1999), but these studies do not look at contracting capabilities explicitly.

2.3.3. Dimensions of Contracting Capabilities

To get a further understanding of contracting capabilities I have divided the construct into four dimensions. Thus to portray different aspects companies encounter and need to succeed with in contractual work. The division is based on my own structuring of different theoretical contributions in the contracting literature. The contracting capabilities dimensions are: term specification and writing, contract adaptation, internal organizing and relationship development and maintenance. They will now be elaborated on.

2.3.3.1. Term Specification and Writing

The first dimension relates to general knowledge on how to prepare, use, and follow-up formal agreements. This encompasses an understanding of how to plan, negotiate, write, and monitor formal contracts, which is a prerequisite to succeed with transactions governed by contracts (Weber and Mayer 2005).

Specifying and writing terms and conditions is a central part of this dimension of contracting capabilities. This may include details on product specifications and quality, payment- and delivery details, and how changes in the above mentioned terms should be dealt with (Rigault 2010). Term specification and writing is the

most basic level of contractual work. It also represents the most frequently conducted activities when designing formal written contracts (Mayer and Argyres 2004).

2.3.3.2. Contract Adaptation

Another key dimension of firms' contracting capabilities concerns contract adaptation. The rationale behind contract adaptation is that every transaction and relationship is different and exposed to different threats. Firms should therefore seek to adapt their contracts accordingly. (Argyres and Mayer 2007; Mayer and Argyres 2004; Mooi and Ghosh 2010; Mayer and Salomon 2006) These authors also refer to antecedents of formal contracting (chapter 2.2) as the main argument why firms need to manage contract adaptation.

Contract adaptation for specific exchanges is viewed as the area with the biggest potential to contribute to competitive advantage (Weber and Mayer 2005). Based on this I argue that adapting contractual terms to transaction specific factors should be included as a dimension of contracting capabilities.

2.3.3.3. Internal Organizing

This dimension is based on Argyres and Mayer's (2007) dual alignment principle. They argue that contract terms should be aligned with a firm's personnel and their knowledge. The rationale behind this argument is that different employees have different competencies. They are therefore equipped to handle different aspects of the contracting process. Weber and Mayer (2005) support this view, and argue that appropriate resource allocation within the firm helps facilitate the contracting process.

Resource allocation relates to the internal organizing of the firm. In practice, this includes getting the right people involved, delegating roles and responsibilities, and deciding who should be in charge (Argyres and Mayer 2007; Weber and Mayer 2005). In this way the contracting process is based on a team effort that is set to extract the full potential of the staff.

A prerequisite to succeed with internal organizing lies in understanding where capabilities and competence lies in the organization (Argyres and Mayer 2007; Nonaka and Takeuchi 1995; Zollo and Winter 2002). As a result, firms can further develop their contracting capabilities for a competitive advantage (Argyres and Mayer 2007).

2.3.3.4. Relationship Development and Maintenance

To this point, contracting capabilities have been discussed in general with no distinction between domestic- and international contracts. The new occurring requirements when one of the trading partners is from a different nationality are so far not debated. Parkhe (1993 in Skarneas, Katsikeas and Schlegelmilch 2002, 763) argues that “when trading activities cross national borders, significant differences in cultural, national, organizational, and managerial factors between exchange parties pervade the relationship.” This suggests that firms are opposed to new requirements to succeed in a continuously more globalized world that is characterized by international trade and different cultures (Brown and Eisenhardt 1998).

A study by Skarneas, Katsikeas and Schlegelmilch (2002) shows that cultural sensitivity displayed by an exporter contributes to commitment in trade relationships. Familiarity with cultural differences is critical to relationship performance when trading abroad.

What becomes clear is the mandate for interpersonal skills, etiquette, and cross-cultural understanding. Possessing knowledge about your partners’ traditions, business practices, and codes of conduct when engaging in trade relations, may very well be a source of advantage.

2.4. Summary of Theory

Several points drawn from the theoretical background have implications for this master thesis. First, even though formal contracts and trust can be substitutes, a formal written contract provides firms with security hard to accomplish by a trustful relationship. Even harder if the transaction is subject to hazards and between partnerships subject to cultural differences.

Secondly, an exhaustive list of activities that should be included in the contracting capabilities construct is difficult to provide. What does become clear, however, is that contracting capabilities also involves preparing and follow-up of formal contracts.

A third implication for this master thesis is the opportunities for contract adaptation. For each transaction partners are free to decide what they want to include in the contract depending on their needs, resources and preferences. That being said; with great power comes great responsibility. Contracting capabilities is thus a source of advantage for firms, which helps them rationalize and devote resources to contractual work in best manner possible. This highlights the importance of contracting capabilities, and why this thesis is an important contribution to this topic.

3. Research Hypotheses

In this chapter I discuss some factors proposed to influence contracting capabilities and the performance implications of these capabilities, based on relationships suggested in my research model (figure 1.1). This provides the basis for my research hypotheses, which will now be presented.

3.1. Factors Influencing Contracting Capabilities

In my research model I have proposed seven characteristics of firms I believe might influence companies levels of contracting capabilities. Some of them are based on theoretical suggestions; resource slack, experience, internal consult and external consult. After examining the literature I did not find any evidence for the relationships between contracting capabilities and the firm characteristics age of firm, size of firm and training. These propositions are therefore based on my understanding of the concept contracting capabilities. The seven firm characteristics and related hypotheses are presented in the next sections.

First, resource slack or resource inadequacy is defined as “a deficiency in the managerial, personnel or financial endowments that a manufacturer requires to engage in export-related activities” (Bello, Chelariu and Zhang 2003, 4). These activities also include forming contracts to govern transactions and relationships with foreign exchange partners.

As contracting capabilities is related to capacity of performing activities related to contracting, I argue that resource slack has a negative impact on contracting capabilities. On the other hand, if firms have the resources to dedicate managers’ time and effort to export activities, they can coordinate tasks like contracting more efficiently (Root 1994). I therefore propose the following relationship:

H1a: The more company resources available for export activities, the higher the level of contracting capabilities.

Secondly, contracting is viewed as a learning process. Contracts are shown to become increasingly more detailed and effective as firms learn from previous

mistakes (Mayer and Argyres 2004; Ryall and Sampson 2009). I argue that over time, and as firms engage in more contractual relationships, their capabilities with negotiating, writing and enforcing contracts improves. This leads to the following hypothesis:

H1b: The more experience in negotiating, writing and using contracts, the higher the level of contracting capabilities.

H1c: The older the age of firm, the higher the level of contracting capabilities.

The employee demographics often tend to be more diversified in larger firms, especially with regards to employee experience and educational background. They are also able to have more developed support functions, e.g. own legal department. The size of the firm may also be an indication of the number of transactions and complexity of those transactions. I therefore propose that:

H1d: The larger the firm size, the higher the level of contracting capabilities.

The practice of engaging consultation in matters where the firm does not hold the necessary competence is growing rapidly. Either in-house employment of lawyers or outsourcing services from more specialized law firms is an opportunity for firms to expand their knowledge base (Weber and Mayer 2005; PWC 2013). This leads me to hypothesize:

H1e: The higher degree of internal consult applied in contracting activities, the higher the level of contracting capabilities.

H1f: The higher degree of external consult applied in contracting activities, the higher the level of contracting capabilities.

Firms that identify best practices and implement routines and guidelines for their employees may experience a more competent and skilled staff (Merchant and Van der Stede 2012). Thus, I propose:

H1g: The higher the degree of employee training in contractual work, the higher the level of contracting capabilities.

3.2. Contracting Capabilities and Performance Implications

Several authors have discussed the performance implications of capabilities. Morgan, Vohires and Mason (2009, 910) argue that firms need to require capabilities to “be able to deploy available resources in ways that match the market conditions faced in order to drive firm performance.” Teece (2007) and Helfat (1997) support this view. Firm-specific capabilities are critical to a firm’s success (Mayer and Salomon 2006), and a source of competitive advantage (Weber and Mayer 2005).

This view is also supported for contracting capabilities, which are associated with more successful contractual relationships. Contracting capabilities are perceived to have positive performance implications (Argyres and Mayer 2007; Weber and Mayer 2005). When firms have the ability and capacity to perform tasks related to contracts in their exchange relationships they can prevent performance losses and costs arising from hazards, and extract more out of their relationships (Poppo and Zenger 2002,. This can contribute to higher performance and leads to the following hypotheses:

H2a: The higher the level of contracting capabilities, the higher is economic firm performance.

H2b: The higher the level of contracting capabilities, the higher is relationship firm performance.

In the analysis section in chapter 5 I test the hypotheses and present the findings.

4. Methodology

This chapter covers the research method used in this thesis. First, a presentation will be given of the choice of research design, qualitative interviews, key informants, context, data collection method, sampling, measures, data collection process and sample characteristics. Thereafter, measures will be assessed. Finally, validity, reliability, and undimensionality are evaluated, and some descriptive statistics presented.

4.1. Research Design

A research design is the plan and structure for investigation, perceived to obtain answers to research questions (Cooper and Schindler 2011). A good research design provides a framework to ensure that research is conducted efficiently (Saunders, Lewis and Thornhill 2012). It encompasses, amongst others, how data will be collected, measured and analyzed (Cooper and Schindler 2011).

4.1.1. The Nature of The Research Design

Research designs can be descriptive, exploratory or explanatory. (Saunders, Lewis and Thornhill 2012) The objective of descriptive research is to gain an accurate profile of situations, events or persons. An exploratory study asks open questions to gain insights about a topic of interest, while explanatory research establishes causal relationships between variables (Saunders, Lewis and Thornhill 2012).

As the purpose of this thesis is to provide companies with a better understanding of how they can develop contracting capabilities to enhance their performance, both an exploratory and explanatory research design were used to answer my research question. An exploratory research design was used in interviews to get insight about firms contracting practices, while an explanatory research design was used for the analysis of relationships between variables.

4.1.2. Qualitative and Quantitative Data

Saunders, Lewis and Thornhill (2012) differentiate between two main types of data, qualitative and quantitative. While qualitative research generates non-numerical data, quantitative research is often referred to as a data collection technique that generates numerical data (Saunders, Lewis and Thornhill 2012).

In this master thesis I have applied both qualitative and quantitative data. The qualitative data was collected during interviews to get a further understanding of the contracting capabilities construct. Thus, the qualitative data have a supporting role.

The quantitative data was collected with a questionnaire to analyze practices for firms in the same industry based on numerical data. The quantitative data has a dominant role in my data collection, as they provide the foundation for analyzing relationships in my research model.

4.1.3. Research Approach

Saunders, Lewis and Thornhill (2012) differentiate between deductive and inductive approaches to research. A deductive approach entails that theory is developed and then tested through propositions. (Saunders, Lewis and Thornhill 2012) With an inductive approach data is collected prior to the development of theory and the results often result in the proposition of a framework.

I am open to discover new patterns and relationships in my qualitative data to provide new theories, indicating an inductive approach. However, I have provided theoretical propositions I seek to test through the collection of data, thus my approach is mainly deductive.

4.2. Qualitative Interviews with Pilot Study

As an extension to prior research on formal contracts, this thesis investigates how firms use contracts in their business and firms contracting capabilities. Since the theoretical foundation on contracting capabilities is limited, I have conducted qualitative interviews as a supplement to current literature on the

topic of contracting capabilities. In this chapter, the purpose of the interviews is presented. Subsequently, the choice of informants and findings from the interviews are discussed.

4.2.1. Purpose of The Interviews

To improve the quality of the empirical study, three interviews with three different informants were conducted. The interviews had three main purposes. The first purpose was to gain a further understanding of the informants' experience and practical knowledge of negotiation, writing and enforcing formal contracts for their transactions.

The second purpose was to find out whether the informants could supplement theory and previous research on contract capabilities. The informants were asked to pinpoint the skills necessary to succeed with negotiation, writing and using formal contracts. The construct contracting capabilities is not an established topic in the industry. This topic was thus discussed thoroughly during the interviews in order to ensure a common understanding of the topic.

In addition, the interviews were used as an arena to pilot test the survey in order to check its understandability and make necessary changes.

4.2.2. Qualitative Informants

I chose to approach three very different firms in terms of size, extent of export activities, and contracting practices to gain different perspectives. The demographics of the firms are summarized in table 1.1.

Table 1.1: Demographics of qualitative informants

	Number of employees	Export activities % of production	Exports to...	Extent of contract use for export transactions
Company 1	30	10%	All over the world	<5%
Company 2	20	90 %	USA, Europe	100%
Company 3	4000 in Norway	90-100%	All over the world	100 %

The first two interviews were personal meetings, while the last were conducted by phone for practical reasons. Due to confidentiality issues, all traceable characteristics of interviewed firms are excluded in the thesis.

4.2.3. The Interviews

In this section the main findings from the qualitative interviews are presented. The findings are shown for each company individually.

Company 1

The first interview was with a small firm who only exports a small percentage of their goods. They produce for sale to countries all over the world. This firm has limited experience with formal contracting. Main focus was to discover why they did not emphasize use of formal contracts, and whether they experienced any problems in their transactions. The three main reasons why they relied on trust instead of formal agreements were (1) transactions of low value; (2) high costs of contracting; and (3) low risk of potential damage. This firm also compensated for the absence of formal contracts with upfront payment from their exchange partners. Thus they were able to eliminate risk at low cost.

Company 2

The second firm was approximately the same size as the first firm. They export almost all of their goods, mostly to the U.S. and Europe. This firm applies formal contracts in all their transactions. In this interview I focused on why they apply formal contracts, and what specifications they include in formal contracts. Attention was also given to problems that could occur in their exchange relationships. Finally, the contracting capabilities construct was discussed.

The informant proved very helpful in shedding light on the rationale firms have for entering formal contracts. He/she argued that the absence of formal contracts for transactions with customers abroad shows signs of inexperience and recklessness. In his/her line of business they often engage in exchange relationships with companies they have never had personal meetings with. The exchange relationships are therefore characterized by the absent of trust, since trust often builds over time. Thus, the need for formal contracts is emphasized.

Further, some transaction attributes were argued to impact this firm's level of detail in contracts. They were: value of transaction, complexity of products, and risk.

The informant from the second interview also indicated that their internal organizing were something he/she considered as an important aspect of contracting capabilities. Adapting contracts to product features, activities, value chain, and financial status is something this firm was very concerned with.

Company 3

The third interview was with a large multinational corporation with operations all across the globe. The company has thousands of employees worldwide, lawyers- and a legal department in each country they operate in. This firm exports almost all of their goods, and use formal contracts for every transaction when they export.

In this interview I focused on the contracting capabilities construct. The informant was asked open questions about contracting capabilities, and what abilities and capacities companies need to succeed with formal contracts in exchange relationships.

The third informant is a lawyer specialized in contracting. He/she has long experience with international exchange partners and detailed commercial contracts. The insights provided by this informant were indispensable for the development of items to measure contracting capabilities.

The main findings from the third interview can be summarized as follows: Firstly, specifications of terms and conditions in formal contracts prevent misunderstandings in exchange relationships. Consequences of contractual breach are also important to formalize in the contract. If companies manage to negotiate strict terms regarding consequences of contractual breach they can prevent such breaches to occur, because their partners would suffer significant financial penalties in case of breach.

Secondly, contracts should be adapted to environmental and transaction specific factors. The informant emphasized risk and potential extent of damage for their products as drivers for written terms in the contract. Thus, terms are drafted in contracts to transfer risk and responsibility.

Thirdly, the informant argued that contracts should be adapted to companies' products and value chains as part of the internal organizing in contractual work. Companies need to know their own organization to succeed.

The informant also emphasized the mandate for interpersonal skills. The ability to communicate, read and understand people is helpful in contractual work. Understanding cultural differences and business practices is important, but you also have to make sure that they know yours. Engaging in contractual relationships thus requires the ability to develop and maintain relationships.

Overall, the qualitative interviews made significant contributions to the survey, and several of the questions in the survey were discovered during these conversations.

4.3. Key Informants

The focus of my thesis was to measure respondents' perceptions on contractual work from the supplier side of the supplier-buyer dyad. Based on previous studies on supplier-buyer relationships, I relied on one key informant from each company with responsibility for contracts in one or more exchange relationships (Sande and Haugland 2011; Poppo and Zenger 2002).

To make sure the respondents had the rights profile, I approached every firm by phone. This was done to locate the respondent holding the proper knowledge and responsibility of contracts regarding sales to customers abroad. Consequently, the questionnaires were sent to respondents by e-mail. Confidence that the right person responded to the survey is high, since I first called the respondent, and then sent personal e-mails with link to the survey.

4.4. Machinery, Equipment and Vehicles Industry

Industry lists from the online database Proff Forvalt was obtained for the data collection. I extracted companies from the database with *production of machinery and equipment for general use* (defined as industry 28), *production of motor vehicles and trailers* (defined as industry 29), and *production of other transport vehicles* (defined as industry 30). All industries are defined according to NACE industry definitions. These industries were chosen because they represent a major part of the Norwegian economy, where development of capabilities to enhance performance would be a valuable contribution.

In addition to the above mentioned industries, three criteria for choice of companies were applied. These criteria were that the company should be Norwegian or located in Norway, engage in activities related to production of goods sold to customers abroad and have more than 10 employees.

4.5. Data Collection Method

A questionnaire is a data collection method where each person is asked to respond to the same questions in a predetermined order (Sauders, Lewis and Thornhill 2012). This data collection method help facilitate standardization and comparison of numerical data, and provide opportunities to evaluate relationships and form models based on the results (Sauders, Lewis and Thornhill 2012).

In a cross-sectional questionnaire data is collected at a single point in time over several units to represent a larger population. (Easterby-Smith, Thorpe and Jackson 2008) A cross-sectional questionnaire makes it possible to investigate how different variables vary across these units. The questionnaire applied in this thesis is cross-sectional and companies function as units of analysis. The survey and associated cover letter can be viewed in Appendix 2.

4.5.1. Online Questionnaire

The data collection was conducted using an online questionnaire through the survey platform Qualtrics. This provided several advantages. It made it possible

to gather data at low cost, and to reach the necessary number of participants without external help from professionals. Qualtrics distributes the survey based on a premade recipient list and data input is automatic, which is time efficient. Once the survey was sent, the respondents could choose when to answer. This made it unnecessary for me to be present when they submitted their answers. Also, the survey platform requested responses to questions the respondents had left out, which prevented missing values in the dataset.

Online questionnaires also have some disadvantages. First, environmental factors are difficult to control. Further, as respondents were given flexibility in when they completed the survey, it could easily be forgotten. Time constraints should also be listed as a threat or barrier to answers if the questionnaire was perceived too long or extensive to complete.

In general, it can be difficult to ensure a sufficiently high response rate. To ensure a high response rate, I called all firms personally before sending the survey. This was done to make sure the right person in the company received the survey and that he or she felt obligated to answer. The respondents were also guaranteed confidentiality to eliminate this as a reason not to respond.

Another factor to consider is the large number of inquiries firms receive from students. To ensure a satisfactory response rate I researched previous surveys to see which industries had the highest response rates to surveys. I also familiarized myself with ongoing thesis projects amongst my colleagues at BI Norwegian Business School to avoid calling the same firms. I sent out two reminder e-mails to increase the response rate (Appendix 3).

4.6. Sampling

Two types of samplings can be identified, namely probability and non-probability sampling (Saunders, Lewis and Thornhill 2012). For probability sampling the chance of being selected from the population is known and research questions can be answered by statistically estimating the characteristics of the population from the sample. For non-probability sampling this chance of being selected is unknown and research questions that require statistical

inferences about characteristics of populations cannot be answered (Sauders, Lewis and Thornhill 2012).

As I am interested in making statistically valid conclusions, I had to ensure that the sampling was representative and that each respondent had the same chance to participate (Sauders, Lewis and Thornhill 2012).

I decided to select my sample amongst Norwegian companies due to practical reasons. They would be easier to get hold of and communicate with, since we share the same mother language. Further, I chose to approach firms with production of machinery and equipment for general use, motor vehicles and trailers, and other transport vehicles as my sample frame, described in chapter 4.4.

The list of firms was extracted from the online database Proff Forvalt. Such databases are often incomplete, inaccurate or out of date (Sauders, Lewis and Thornhill 2012). Thus, I ensured that the database was based on public registers of companies and chose the last published version.

The database did not enable to sort out only export firms. I thus assured that the firms were engaged in export when I approached them by phone. Only firms exporting their goods to one or several countries were included in the sample.

Further, two types of firms were left out of the survey: First, firms that export, but do not use contracts are excluded because they would be unable to answer the majority of the questions in the survey. Secondly, firms that use contracts when they export, but handle their contracts locally in other countries are excluded because their answers would not reflect Norwegian practices.

In some cases the industry lists contained contact information for several business units in each firm. I chose to approach one division in each firm, mainly headquarters. The rationale behind this was that several survey responses from each firm could affect the statistical validity of my results. It is reason to believe that the different divisions in a firm apply the same practices and

therefore will have similar responses. The results would therefore be affected by big corporations with many divisions and not reflect the sample as whole. When several daughter companies owned by one corporation were listed, I approached all companies functioning as a separate legal entity.

All participants viewed available and eligible to participate in the survey based on the criteria presented in this section, where given the same opportunity to do so.

4.7. Measures

Most of the variables in my research model are previously used in empirical research, and have valid measures. Where the measures existed, they were used. In the cases where measures did not exist, new ones were developed. They are based on related research, input from my supervisor and key informants so no pretest was concluded.

4.7.1. Dependent Variables

A dependent variable will change in response to changes in other variables (Saunders, Lewis and Thornhill 2012, 424). In this research model, firm performance is a dependent variable.

4.7.1.1. Firm Performance

Firm performance can be established in several ways, and both objective and perceptual measures are widely used (Morgan, Vohires and Mason 2009). Perceptual measures indicate a firm's subjective evaluation of their performance compared to their industry (Lusch and Brown 1996; Lu et al. 2010). They can be appropriate when firms are unwilling, or unable, to provide financial measures. They are also appropriate when there are variations in accounting practices (Lu et al. 2010; Woodcock, Beamish and Makino 1994).

Previous studies show that perceptual measures of performance correlate well with objective measures of performance (Dess and Robinson 1984; Geringer and

Hebert 1991). In this thesis I apply perceptual measures. All firms approached to participate in the study are from the same industries. This choice was made to avoid variation in firm performance due to industry structure, as well as other environmental factors (Lusch and Brown 1996).

In this thesis I applied economic export performance to measure economic firm performance, and customer export performance to measure relationship firm performance. The latter is a measure of partnership satisfaction at the level of buyer satisfaction (Poppo and Zenger 2002; Anderson and Narus 1990; Mohr and Speckman 1994; Saxton 1997). The frame is based on how they have performed compared to their closest competitors the last 12 months on a 7 point Likert scale (1=much worse, 4=the same, 7=much better), see table 4.1. and 4.2.

The question asked in the survey to measure economic export performance is: *“How has your firm performed economically compared to your closest competitors the last 12 months?”*

Table 4.1: Questionnaire items for measuring economic export performance

Item	Item Statement	Item previously used by
eper1	Export sales volume	Morgan et al. 2004
eper2	Export market share	Morgan et al. 2004, Lu et al. 2010
eper3	Profitability	Morgan et al. 2004, Lusch and Brown 1996
eper4	Percentage of sales revenue derived from products introduced in foreign markets during the last three years	Morgan et al. 2004

The question asked in the survey to measure customer export performance is: *“How has your firm performed in customer relationships compared to your closest competitors the last 12 months?”*

Table 4.2: Questionnaire items for measuring customer export performance

Item	Item Statement	Item previously used by
cper1	Quality of your company’s relationships with foreign customers	Morgan et al. 2004
cper2	Reputation of your company amongst your foreign customers	Morgan et al. 2004
cper3	Foreign customer loyalty to your firm	Morgan et al. 2004
cper4	Foreign customers satisfaction	Morgan et al. 2004, Lu et al. 2010

4.7.2. Independent Variables

An independent variable is a variable that causes changes in the dependent variable (Saunders, Lewis and Thornhill 2012, 424). In this case contracting capabilities is an independent variable with consequences for the dependent variable firm performance. To measure contracting capabilities a new scale were developed.

4.7.2.1. Contracting Capabilities

The construct contracting capabilities is fairly new and no measures are currently available. One of the objectives of this thesis is to identify what this construct encompasses, and to develop some items on how it can be measured. Some theoretical contributions provided in chapter 2.3 were used as masis for some of the items (Argyres and Mayer 2007; Mayer and Argyres 2004; Mayer and Salomon 2006; Weber and Mayer 2005). Input from my thesis supervisor Jon Bingen Sande and interview informants also proved helpful.

The list of items is not exhaustive, but should include the most significant aspects of the contracting process. Responses are framed in line with conceptualization of capabilities as organizational processes performed relative to competitors (Morgan, Vohires and Mason 2009; Bingham, Eisenhardt and Furr 2007; Ethiraj et al. 2005).

The question asked is “*compared to what you believe is normal amongst your closest competitors, how good is your firms capacity/competence to perform the following activities?*” Answers are rated on a 7 point Likert scale (1=very poor capacity/competence, 4=approximately the same capacity/competence, 7=very good capacity/competence), see table 4.3 to 4.6.

Table 4.3: Questionnaire items for measuring contracting capabilities as term specification and writing

Item	Item Statement	Item previously used by
cc3	Plan formal, written contracts	New
cc13	Negotiate terms and conditions in contracts	New
cc14	Specify/formulate technological specifications, product specifications and product quality in formal contracts	New
cc15	Specify/formulate payment conditions in formal contracts	New
cc16	Specify/formulate terms of delivery in formal contracts	New
cc17	Specify, formulate and follow up on how changes in prices, product specifications and terms of delivery should be managed	New
cc18	Monitoring of export customers contractual follow-up	New
cc19	Mediation skills for disagreements and conflicts	New

Table 4.4: Questionnaire items for measuring contracting capabilities as contract adaptation

Item	Item Statement	Item previously used by
cc6	Analyze/understand how contracts should be adapted to special characteristics of transactions with customers abroad	New
cc7	Analyze/understand how contracts should be adapted to special characteristics of the customers value chain/needs	New
cc8	Analyze/understand how contracts should be adapted to the type of relationship we want with our customers	New
cc9	Analyze/understand how contracts should be adapted to different market conditions	New
cc10	Analyze/understand how contracts should be adapted to different countries legal systems	New
cc11	Analyze/understand how contracts should be adapted to different types of risks related to projects	New
cc12	Analyze/understand how contracts should be adapted to different projects responsibilities and scope of damage	New

Table 4.5: Questionnaire items for measuring contracting capabilities as internal organizing

Item	Item Statement	Item previously used by
cc1	Delegate responsibilities and tasks related to contractual work within my firm	New
cc2	Conduct financial analyzes to evaluate the profitability of transactions and customer relationships.	New
cc4	Analyze/understand how contracts should be adapted to special characteristics of my firm's products	New
cc5	Analyze/understand how contracts should be adapted to special characteristics of my firm's value chain and activities	New

Table 4.6: Questionnaire items for measuring contracting capabilities as relationship development and maintenance

Item	Item Statement	Item previously used by
cc20	Ability to cooperate with customers to reach common goals	New
cc21	Develop and sustain interpersonal relationships	New
cc22	Adjust to cultural differences between my firm and customers firms' abroad	New
cc23	Adjust to different customs and practices in different countries	New

4.7.3. Control Variables

In the model I also included some control variables I propose to have a positive impact on level of contracting capabilities within firms; resource slack, experience, age of firm, size of firm, internal consult, external consult and training.

4.7.3.1. Resource Slack

To measure the firm's available resources for conducting export activities, four items previously used by Bello, Chalariu and Zhang (2003) are applied. The respondents are asked to "*consider the following statements and evaluate your firms resources...*" The questions are framed on a 7 point Likert scale from 1=completely disagree, 4=neither agree nor disagree to 7=completely agree, see table 4.7.

Table 4.7: Questionnaire items for measuring resource slack

Item	Item Statement	Item previously used by
res1	Our firm lacks the financial resources needed to expand our export efforts	Bello et al. 2003
res2	Most of our resources are devoted to the domestic market, leaving little room for export expansion	Bello et al. 2003
res3	Human resources limit my firm's ability to increase our export activities	Bello et al. 2003
res4	Our export expansion is limited by the time and effort that management can devote to exporting	Bello et al. 2003

4.7.3.2. Experience

New items were developed to measure experience with contractual work in cooperation with my thesis supervisor. The respondents are asked to evaluate "*What are your firms experience in negotiating, writing and using formal, written contracts?*" and range their answers on a 7 point scale from

1=completely disagree, 4=neither agree nor disagree to 7=completely agree, see table 4.8.

Table 4.8: Questionnaire items for measuring experience

Item	Item Statement	Item previously used by
exp1	We have long experience with the use of formal, written contracts	New
exp2	We have expertise in writing formal contracts	New
exp3	We have many employees with experience in negotiating formal, written contracts	New

4.7.3.3. Age of Firm

Age of firm is measured in one question, as basic as “*What is the age of your firm?*” with a request to answer in number of years (Beuve and Saussier 2011).

4.7.3.4. Size of Firm

Size of firm is established based on “*How many people are employed by your firm?*” (Beuve and Saussier 2011; Rokkan, Heide and Wathne 2003; Morgan, Kaleke and Katsikeas 2004; Morgan, Vohires and Mason 2009). The respondents are requested to answer in approximately number of employees.

4.7.3.5. Internal Consult

One item is used to measure internal consult: “*How many lawyers are employed by your firm?*” in approximately number of lawyers.

4.7.3.6. External Consult

External consult is measured on “*To what extent does your firm apply external consultation for contractual work related to export transactions?*” on a 7 point Likert scale from 1= to a very small extent to 7=to a very large extent, see table 4.9.

Table 4.9: Questionnaire items for measuring external consult

Item	Item Statement	Item previously used by
ec1	We use external lawyers for contractual work related to export transactions	New

4.7.3.7. Training

Five new items are developed in cooperating with my supervisor for the use of guidelines, routines and training for employees regarding contractual work. They are asked to evaluate the items based on “*to what extent does your firm have/apply...*” with a frame from 1= to a very small extent to 7=to a very large extent, see table 4.10.

Table 4.10: Questionnaire items for measuring training

Item	Item Statement	Item previously used by
train1	Routines and guidelines for contractual work	New
train2	Training of new employees in contractual work	New
train3	Employees participate in courses and seminars in contractual work for academic knowledge	New
train4	Employees read academic papers, press and reports to stay up to date on contractual work	New
train5	Processes for identification of “best practices” on how to work with formal contracts	New

4.8. Data Collection Process

The study was a self-administered questionnaire. A cover letter containing a template was therefore included as part of the questionnaire to explain the purpose of the study. This is in line with recommendations given by Saunders, Lewis and Thornhill (2012). The letter also informed that participation was voluntary, and that all information would be treated confidentially (see Appendix 2). An additional confidentiality agreement was provided to the respondents that required this.

The master thesis was reported as a project to the Norwegian Social Science Data Services as obligated by Norwegian laws regarding storage of sensitive information (see Appendix 3).

Prior to sending the questionnaire, I approached all firms by phone during the period 17.4.2013 to 10.5.2013. I contacted each firm to ensure that they fitted the criteria discussed in chapter 4.6. I also wanted to find respondents with proper knowledge within the area of interest. My progress in this period was inserted into an excel spreadsheet to keep tabs on their status with regards to who had been contacted, who did not fit the profile, who agreed to participate,

and who needed to be contacted at a later stage. This was done to structure the process and ensure quality in the data collection.

Shortly after calling the respondents, e-mails were sent with a link to the survey. This was done to reduce the time elapsed from commitment to opportunity to participate, thus to ensure a higher response rate while they still felt obligated to respond. Two reminder e-mails were also sent to ensure more responses (Appendix 4).

When I applied the search criteria as described in chapter 4.4 a total number of 579 companies were extracted from the database. This includes several subdivisions of firms. 432 companies were removed because they did not fit the profile to participate in the study as discussed in chapter 4.6.

Thus, out of the 579 companies contacted, 147 were viewed reachable and eligible to participate. A total of 117 companies agreed to contribute to the study and allowed me to send the survey. I received 76 responses (N=76), which gives an active response rate of 51,7 % (76/147).

After revising the data, I found no responses that could interfere with the quality of my analyses. Thus no responses were removed. A comparable study by Mooi and Ghosh (2010) argue that their response rate of 59 % is favorable in light of other B2B studies. I therefore conclude that my response rate of 51,7 % is a good response rate.

The results from the questionnaires were coded into numbers to run statistical analyses. A benefit of this procedure is that it gives an opportunity to enter data with fewer errors (Sauders, Lewis and Thornhill 2012). Answers were requested for most of the questions to prevent missing values. Some firms still chose not to answer some of the questions in the survey. A few values are therefore missing. The survey tool Qualtrics presented that 97 % of all questions were replied, which indicates that the majority of questions are answered.

4.9. Sample Characteristics

Out of the 76 firms in the sample, formal contracts are used in 10 to 100 percent of all transactions when selling to customers abroad. Only firms with formal contracts were invited to participate in the survey. This entails that these firms will report a practice of applying formal contracts for their transactions above zero. As expected, the application of formal contracts is high (see table 4.11).

Table 4.11: Use of formal contracts for export transaction

	Minimum	Maximum	Mean
Use of formal contracts	10	100	84.46

The companies that responded to the questionnaire are between 7 and 151 years. They have between 8 and 22000 employees. This entails that the distribution of firms with regards to experience and size is broad. The companies also have between 0 and 30 employed lawyers. Most of the firms have 0 or 1 employed lawyer, which is supported by the low mean at 0,69. The majority of the firms do not have a legal department.

With regard to external consultation, the respondents were asked to range their use on a 1-7 scale, where 1 is to a very small extent and 7 is to a very large extent. As shown in table 4.12, the mean at 3,05 shows a standard use of external help for contractual work.

Table 4.12: Characteristics of companies

	Minimum	Maximum	Mean
Age of firm	7	151	44.57
Number of employees	8	22000	697.54
Internal Consult	0	30	.69
Legal Department	1	2	1.83
External Consult	1	7	3.05

The sample characteristic of firms' net operating income from export activities was hard to establish based on the responses. There were several missing values. Some respondents seem to have misunderstood that the question should be answered in millions, and some answers are listed with a range, e.g. 2-5 mill. I revised the responses to fit the same criteria of commas and numbers of zeros.

Based on this, the net operating incomes range between 0-480 million NOK. This again supports that I have a wide distribution of firms.

The same problem occurred for the typical value of an export transaction for the firms. I was aware that this might cause problems prior to sending the survey, because firms are often reluctant to provide such information. Also, firms often operate with different measures. Still, the item was kept. All questions were based on their export activities in general, and not one specific transaction with one specific customer. The typical value of a transaction ranges from 50 000-850 mill NOK.

Furthermore, I wanted to examine the firms' experience and extent of export activities. Therefore, their tenure as exporter and the percentage of their products sold abroad was established (see table 4.13). The responding firms report that they have been exporting from 2 to 151 years, with a mean of 27 years. The average of products to be exported is about 52 %.

Table 4.13: Characteristics of firms export experience

	Minimum	Maximum	Mean
Tenure as exporter	2	151	27.53
Percentage of products exported	2	100	52.51

The average use of previously written contracts and premade templates, as foundation for new contracts, is listed at 65,45 percent. The adjustments made to these templates are moderate based on a 1-5 scale (see table 4.14).

Table 4.14: Use of premade templates for formal contracts

	Minimum	Maximum	Mean
Use of templates in %	0	100	65.45
Adjustment to template	1	5	2.91

4.10. Measurement Evaluation

In this chapter I will present an assessment of the constructs in my research model (figure 1.1). I will evaluate model fit, validity, reliability and unidimensionality for the constructs.

I used confirmatory factor analysis (CFA) to ensure that the items applied in the questionnaire had valid measures, and to test the measurement models. Analyses were conducted in Lisrel 8.80 student edition, which enabled me to only measure 15 items simultaneously.

When deciding on model fit for the measurement models, I applied the following criteria: p-value should be higher than 0,05, chi-square and degrees of freedom (df) similar to each other. Root Mean Square Error of Approximation (RMSEA) should be lower than 0,08 to fit the data reasonably, and lower than 0,05 to indicate close fit (Browne and Cudeck 1993 in Jöreskog and Sörbom 1993, 124; Kelloway 1998).

As a general rule, all factor loadings should be no less than 0,5 for the variables to have sufficient explanation, and all loadings higher than 0,5 are considered “practically significant” (Hair Jr. et al. 2010). Further, Hair Jr. et al. (2010) also provide guidelines for satisfactory factor loadings based on sample size. I have 76 observations (N=76), and should therefore have factor loadings over 0,65. However, in practice I follow the general rule of 0,5 for models with good fit.

Although the survey automatically requested responses for most questions, the dataset contained some missing values. To correct for this, I applied an Insert Missing Value function in Lisrel before I analyzed the data. Lisrel estimated the missing values based on average score of the other responses, and how other respondents with similar characteristics have responded. This was applied when the program was able to compute values to be inserted. For the other missing values I applied averages calculated in Excel.

4.10.1. Principal Component Analysis

The student edition of Lisrel only allows for 15 variables to be evaluated at the same time. I therefore incurred some challenges for the contracting *capabilities construct* (CC), which contains 23 items in the questionnaire. As a solution to this problem, I ran a Principal Component Analysis in SPSS to see if the items

load on different components, thus to divide contracting capabilities into dimensions.

First, a Kaiser-Mayer-Oklin measure was used to see if my distribution of values was adequate to conduct a Principal Component Analysis (George and Mallery 2011; Stern 2011), see table 4.15.

Table 4.15: KMO and Bartlett’s test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	,889
Bartlett's Test of Sphericity	
Approx. Chi-Square	1702,104
Degrees of Freedom	253
Significance	,000

A test statistics of 0,889 (see table 4.15) is valued at the top end of the scale as meritorious (George and Mallery 2011). This indicates that my data is adequate for analysis. Further, Bartlett’s test of sphericity indicates whether the correlation mix is an identity matrix. Data is viewed acceptable for analysis if the correlation mix is not an identity matrix. A significance of under 0,05 indicates that the correlation mix is not an identity matrix. The data is thus appropriate for further testing (George and Mallery 2011). This was confirmed with a significance of 0 in my case.

Secondly, the Rotated Component Matrix (table 4.16) shows the results of the Principal Component Analysis. I can see that the 23 items for the construct contracting capabilities load for four components. By reviewing the questionnaire (appendix 2) I see that the Principal Component Analysis support my suggested dimensions of contracting capabilities in chapter 2.3.3. This is found because the items put together by SPSS can all be attributed to the proposed dimensions.

Factor 1 shows high loadings for item cc3 and cc13-cc19, ranging from 0,530 and upward. All these items are related to the process of contracting and specifications; included planning, negotiating, monitoring and specifications. This seems logic based on theory presented on term specification and writing as

a dimension of contracting capabilities (chapter 2.3.3.1). The name *term specification and writing* (SKCC) is kept.

Factor 2 has high loadings for cc6-cc12 ranging from 0,612 to 0,914. All the questions are related to how contracts should be adapted to different transaction and relationship attributes. This is in line with theory presented on contract adaptation (chapter 2.3.3.2). The dimension name is kept as *contract adaptation* (ADCC).

Factor 3 shows high loadings for items cc1, cc2, cc4 and cc5, from 0,582 and upward. The items cover characteristics of the firm and internal organizing related to the contracting process. The dimension is termed *internal organizing* (FICC) since it involves the same activities as proposed in chapter 2.3.3.3.

Factor 4 has high loadings for items cc20-cc23, ranging from 0,685 and upward. All items are related to interpersonal skills, cooperating and understanding of cultural differences. It therefore seems logical that they are placed together. The dimension is termed *relationship development and maintenance* (RECC) in line with theory discussed in chapter 2.3.3.4.

The four identified dimensions of contracting capabilities will be applied for single-factor confirmatory analyses in Lisrel. This is presented in the next chapter.

Table 4.16: Rotated component matrix^a

	Components			
	(1) Term specification and writing	(2) Contract adaptation	(3) Internal organizing	(4) Relationship development and maintenance
cc3	,530	,313	,519	,160
cc13	,612	,407	,248	,317
cc14	,707	,215	,111	,271
cc15	,845	,153	,166	,320
cc16	,867	,201	,204	,224
cc17	,783	,225	,192	,223
cc18	,673	,333	,010	,306
cc19	,593	,457	,117	,121
cc6	,483	,612	,434	,103
cc7	,324	,765	,204	,050
cc8	,258	,725	,213	,257
cc9	,306	,743	,406	,041
cc10	,090	,914	,105	,042
cc11	,248	,665	,413	,323
cc12	,307	,763	,142	,307
cc1	,131	,376	,597	,275
cc2	,054	,160	,765	,138
cc4	,372	,517	,582	,190
cc5	,423	,569	,584	-,060
cc20	,403	,262	-,047	,685
cc21	,365	,108	,003	,801
cc22	,234	,042	,314	,836
cc23	,193	,154	,308	,864

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

4.10.2. Single-Factor Confirmatory Factor Analysis

Theoretical constructs can be hard to operationalize in a single measure, especially for new constructs not previously examined. Measurement errors are therefore often unavoidable (Fornell and Larcker 1981). To assess how correlations among observed variables can be described by latent variables, and to investigate the measurement of constructs, I ran single-factor confirmatory factor analyses (see Appendix 5). Measurement models for *age of firm*, *size of firm*, *internal consult*, and *external consult* could not be tested because these constructs is only measured with one item each.

When I ran the *resource slack* construct (RES) I found that not all factor loadings were satisfactory with res1 “my firm lacks financial resources necessary to expand export efforts” at 0,36. Further, the model did not provide a good fit with RMSEA = 0,124. I saw from the questionnaire that res1 refers to financial resources, while the other items were related to human resources necessary to expand export efforts. This item was viewed non consistent with the others as measuring resource slack, and therefore removed. The model fit improved significantly, with all factor loadings over 0,55 (res2), chi-square and $df = 0$, $p\text{-value} = 1$, RMSEA = 0. Because of a low number of items, the fit indicators will show $p\text{-value} = 0$ and RMSEA = 0, with perfect model fit.

For the *experience* construct (EXP), all factor loadings were over 0,51, and the model fit indicators as for resource slack with chi-square and $df = 0$, $p\text{-value} = 1$, and RMSEA = 0. The model was kept without alterations.

When I ran the *training* construct (TRAIN), all factor loadings were over 0,69 and satisfactory. However, the model had a poor fit. I opened for a correlation between items train1 “routines and guidelines for contractual work” and train2 “training of new employees in contractual work”, as suggested as a modification indices by Lisrel. The rationale is based on firms practice to implement routines and guidelines as part of training for new employees. I got an improved and good model fit with all factor loadings over 0,63, chi-square = 2,22 and $df = 4$, $p\text{-value} = 0,695$, RMSEA = 0.

The model for *term specification and writing* (SKCC) provided me with some challenges. When measuring a construct with 8 items, it is difficult to obtain a good model fit. Based on correlations between some of the items, I decided to divide the term specification and writing construct into the sub-constructs skcc1, skcc2 and skcc3 to run the analysis. The items regarding specification of payment and delivery terms, cc15 and cc16, were linked to skcc2. The same procedure was conducted for the items regarding monitoring and mediation, cc18 and cc19. They were related to skcc3. The rest of the items are linked to skcc1. All factor loadings are above 0,69, chi-square = 26,77, $df = 17$, $p\text{-value} = 0,06156$ and RMSEA = 0,088. The model fit is satisfactory.

The *contract adaptation* measurement model (ADCC) was subject to the same challenges as described above. Again, I had to separate the items into two constructs. Adcc1 represents cc6, cc7, cc8 and cc9, regarding customer specific factors. Adcc2 represents cc10, cc11 and cc12, regarding risk and legal matters. All factors loaded above 0,83, with chi-square = 21,82, df = 13, p-value = 0,05817 and RMSEA = 0,095. Despite high RMSEA all items were kept.

Internal organizing (FICC) had a chi-square = 1,10, df = 2, p-value = 0,57738 and RMSEA = 0, which indicates a good model fit. The lowest factor loading was 0,51 for cc2, which is related to conducting financial analyses to evaluate profitability of transactions and customer relationships. This is borderline the suggested standard as discussed in the introduction of chapter 4.10. I still decided to keep this item because 0,51 is above the general rule of 0,5 I follow in this thesis.

The *relationship development and maintenance* (RECC) model had some suggested modification indices. I opened for correlation between item cc22 and cc23, as they can be perceived to measure the same practice of adjusting to cultural differences. All factor loadings were over 0,74, chi-square = 1,76, df = 1, p-value = 0,18433 and RMSEA = 0,101. This represents satisfactory model fit.

When I ran the measurement model for *economic export performance* (EPER), many modification indices were suggested. An attempt to open for all correlations would give a negative degree of freedom, and affect the quality of the model. I only opened for correlations between eper3 and eper4. This was justified based on the question contents. The new model fit had 0,63 as the lowest factor loading for eper3 on profitability. The model had a chi-square of = 2,02, df = 1, p-value = 0,15493, and RMSEA = 0,117. Except the high RMSEA, the model fit was good.

The measurement model for *customer export performance* (CPER) had very good factor loadings over 0,81, chi-square = 4,86, df = 2 and p-value = 0,08815.

The RMSEA was higher than satisfactory level at 0,138, but otherwise a good model fit.

Based on the evaluations of the measurement models described (Appendix 5), all items were kept with the exception of res1.

4.10.3. Two-Factor Confirmatory Factor Analysis

I tested the latent variables against each other to check for cross-loadings and to evaluate model fit. Cross-loadings occur when a variable have more than one significant loading (Hair Jr. et al. 2010). Table 4.17 shows the correlations between the constructs.

Table 4.17: Correlation matrix between constructs

	RES	EXP	TRAIN	SKCC	ADCC	FICC	RECC	EPER	CPER
Resource slack (RES)	1								
Experience (EXP)	-0,25	1							
Training (TRAIN)	-0,27	0,69	1						
Term specification and writing (SKCC)	N/A	N/A	N/A	1					
Contract adaptation (ADCC)	N/A	N/A	N/A	N/A	1				
Internal organizing (FICC)	-0,12	0,58	0,43	N/A	N/A	1			
Relationship development and maintenance (RECC)	0,07	0,29	0,20	N/A	N/A	0,5	1		
Economic export performance (EPER)	-0,14	0,29	0,29	N/A	N/A	0,43	0,24	1	
Customer export performance (CPER)	0,01	0,10	0,28	N/A	N/A	0,52	0,40	0,58	1

From table 4.17 I see that the correlations differ across various constructs. The highest correlations are found between the *experience* and *training* constructs (0,69). The two performance measures *economic export performance* (EPER) and *customer export performance* (CPER) also have a high correlation (0,58).

As discussed in chapter 4.10.2, I experienced problems when measuring *term specification and writing* (SKCC) and *contract adaptation* (ADCC). This entails that I was unable to perform two-factor CFA of these constructs. These two constructs are therefore noted as not available (N/A) in table 4.17. Since, skcc1-skcc3 all reflects the same dimension term specification and writing (SKCC)

they are merged for the regression analysis. This was also done for adcc1 and adcc2, which is merged as contract adaptation (ADCC) for the regressions.

An overview of the characteristics of the different fit indices for the two-factor confirmatory factor analysis is shown in appendix 6. The overview shows chi-square, degrees of freedom (df), p-value, RMSEA and comparative fit index (CFI). These indices can be used to evaluate if one model is better than another model (Hair Jr. et al. 2010).

When a model has less than 12 variables, CFI should be 0,97 or higher (Hair Jr. et al. 2010, 672). This applies to all my models. From appendix 6 I see that the *experience and relationship development and maintenance* model has a CFI value of 0,96. This indicates that one model have a poorer fit than the others. Due to the already discussed difficulties in running the two-factor confirmatory factor analysis on *term specification and writing* (SKCC) and *contract adaptation* (ADCC), I have noted N/A for these constructs in the fit indices table in appendix 6.

To summarize I found that the two constructs experience and training might be correlated. Further, the two-factor confirmatory factor analysis shows that the model for experience and relationship development and maintenance perform worse than the other models.

4.10.4. Convergent Validity and Reliability

Validity refers to the degree a measure accurately represents the concept intended to measure, and is necessary in order to be able to draw conclusions from research (Hair Jr. et al. 2010). Convergent validity refers to the “extent to which indicators of a specific construct converge or share a high proportion of variance in common” (Hair Jr. et al. 2010, 689). Convergent validity is therefore used to test to what extent measures of the same concept are correlated.

In order to make conclusions about convergent validity, I calculated average variance extracted (AVE) and construct reliability (CR), as shown in table 4.18.

If results show high AVE and CR values, in addition to high factor loadings, it indicates convergent validity.

Table 4.18: Convergent validity with AVE and construct reliability scores

	SC	SC Squared	SE	AVE	CR
Resource slack	2,16	1,613	1,39	0,54	0,77
Experience	2,04	1,439	1,57	0,48	0,73
Training	3,83	2,973	2,01	0,59	0,88
Term specification and writing	6,62	5,546	2,42	0,69	0,95
Contract adaptation	6,07	5,269	1,74	0,75	0,95
Internal organizing	3,01	2,406	1,60	0,60	0,85
Relationship development and maintenance	3,21	2,593	1,39	0,65	0,88
Economic export performance	3,26	2,718	1,28	0,68	0,89
Customer export performance	3,44	2,962	1,03	0,74	0,92

AVE is a scale that measures the proportion of variance explained by the latent factor structure. (Hair Jr. et al. 2010, 709) It is desired to have an AVE of 0,5 or higher. In table 4.18 I see that most values are good and above 0,5, indicating that variance is sufficiently explained by the latent factor structure imposed on the measure. The only exception is the *experience* (EXP) construct with an AVE value of 0,48.

Construct reliability (CR) indicates internal consistency and that the measures consistently represent the same latent construct. Values above 0,7 suggest good reliability, and values between 0,6 and 0,7 may be acceptable if other construct validity measures are good (Hair Jr. et al. 2010, 710). All my CR scores indicate very good construct reliability, in which the lowest value is 0,73. This is still with a margin above required level.

Finally, I checked all the factor loadings from the single-factor CFA to see if they have satisfactory values (appendix 5). The value of 0,51 for item cc2 in the *internal organizing* model was low, indicating that other factors can influence this item. The question asked is: “compared to what you believe is normal among your closest competitors, how well is your capacity/competence to perform financial analyses to evaluate profitability of transactions and customer relationships?” I can see why this item have a higher error than the rest, based on

the rational that firms conduct financial analyses for a number of reasons. The expl1 item in the *experience* model also had a low factor loading at 0,51. The question asked is “we have long experience in using formal, written contracts.” This question may be perceived as relative and difficult to answer.

The low factor loadings for internal organizing and experience are supported by the AVE and CR values. Internal organizing has an AVE value of 0,6 and CR 0,85 which is amongst the lowest in the test. Experience performs even worse in this test, with AVE 0,48 and CR 0,73 as the lowest scores amongst the constructs.

In conclusion, the overall assessment of AVE, construct reliability and factor loadings all shows satisfactory values. This indicates that convergent validity and reliability is present.

4.10.5. Evaluating Undimensionality

Undimensionality exists when “a set of measured variables (indicators) can be explained by only one underlying construct” (Hair Jr. et al. 2010, 696). Undimensionality becomes especially important when more than two constructs are involved in a model (Hair Jr. et al. 2010). Accomplishing this is important, because a lack of undimensionality can lead to misinterpretation of the model. It might also indicate that the items are not related to the appropriate construct.

I applied the single-factor measurement models (appendix 5) to evaluate undimensionality for the constructs. The results are presented in table 4.19.

Table 4.19: Undimensionality

Resource slack	Undimensionality
Experience	Undimensionality
Training	Undimensionality
Term specification and writing	*Weak Undimensionality
Contract adaptation	*Weak Undimensionality
Internal organizing	*Weak Undimensionality
Relationship development and maintenance	*Weak Undimensionality
Economic export performance	Undimensionality
Customer export performance	Undimensionality

* Weak undimensionality means that the items capture different dimensions of the construct.

4.10.6. Discriminant Validity

Discriminant validity is “the extent to which a construct is truly distinct from other constructs” (Hair Jr. et al. 2010, 710). This is important to determine since many of my constructs are closely related. The contracting capability construct is of special importance. This construct is a new concept and evidence supporting this as a unique phenomenon is lacking.

To evaluate discriminant validity I calculated AVE values for each construct (table 4.18). Further, I squared the correlation estimates between all constructs, based on output from the two-factor CFA in table 4.17. The latter shows how much variance two constructs share. Finally, I compared the AVE values with the squared correlation estimates as presented in table 4.20. When the AVE values are higher than the squared correlations, good evidence is provided to conclude that discriminant validity is present (Hair Jr. et al. 2010, 710). I see that discriminant validity is present in all constructs.

Table 4.20: Squared cross correlations between variables and AVE for each construct

	RES	EXP	TRAIN	SKCC	ADCC	FICC	RECC	EPER	CPER
Resource slack (RES)	<i>0,5377*</i>								
Experience (EXP)	-0,0625	<i>0,4797*</i>							
Training (TRAIN)	-0,0729	0,4761	<i>0,5946*</i>						
Terms specification and writing (SKCC)	N/A	N/A	N/A	<i>0,6933*</i>					
Contract adaptation (ADCC)	N/A	N/A	N/A	N/A	<i>0,7527*</i>				
Internal organizing (FICC)	-0,0144	0,3364	0,1849	N/A	N/A	<i>0,6015*</i>			
Relationship development and maintenance (RECC)	0,0049	0,0841	0,0400	N/A	N/A	0,2500	<i>0,6483*</i>		
Economic export performance (EPER)	-0,0196	0,0841	0,0841	N/A	N/A	0,1849	0,0576	<i>0,6795*</i>	
Customer export performance (CPER)	0,0001	0,0100	0,0784	N/A	N/A	0,2704	0,1600	0,3364	<i>0,7407*</i>

**AVE in italics*

4.11. Descriptive Statistics

I ran descriptive statistics for all constructs to give an overview of the responses to the survey (table 4.21). All items are measured on a 1-7 point Likert Scale. For some questions respondents did not use all response options. The minimum and maximum value for these items are therefore e.g. 3 and 7. The item removed during the single-factor confirmatory factor analyses (res1) is not listed.

Skewness is used to measure the symmetry or balance of the distribution, and will be compared to the normal distribution. Skewness values falling outside the -1 and +1 range indicate a substantial skewed distribution (Hair Jr. et al. 2010). Almost all my values fall into this range, which entails that the distribution is balanced. The only exception is the value for exp1, which is -1.170 and skewed (table 4.21). This item may departure from normality because of the small sample size, which can increase measurement errors (Hair Jr. et al. 2010).

Kurtosis measures the peakedness of a distribution compared to a normal distribution. (Hair Jr. et al. 2010, 35) A positive value indicates a relatively peaked distribution and a negative value indicates a flat distribution Kurtosis values show that most of the items are relatively flat distributed, as they are negative. However, some values are positive and indicate a peaked distribution: exp1, cc2, cc19, eper3 and eper4.

In conclusion, the descriptive statistics show that most values have a balanced distribution with a few exceptions.

Table 4.21: Descriptive statistics

	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
res2	1	7	2.66	1.732	.864	-.206
res3	1	7	3.83	1.799	-.202	-1.189
res4	1	7	3.33	1.742	.083	-1.287
exp1	2	7	6.05	1.210	-1.170	.813
exp2	1	7	4.76	1.683	-.361	-.522
exp3	1	7	4.35	1.640	-.126	-.793
train1	1	7	4.14	1.787	-.065	-1.119
train2	1	7	3.34	1.571	.406	-.417
train3	1	7	3.14	1.749	.356	-.898
train4	1	7	3.11	1.596	.328	-.602
train5	1	7	3.21	1.577	.354	-.589
cc1	2	7	4.43	1.050	-.034	-.059
cc2	1	7	4.50	1.260	-.288	.541
cc3	2	7	4.63	1.118	.307	-.453
cc4	2	7	4.78	1.196	.062	-.822
cc5	2	7	4.74	1.124	.021	-.711
cc6	2	7	4.68	1.086	.280	-.345
cc7	2	7	4.58	1.169	.062	-.213
cc8	3	7	4.84	1.071	-.077	-1.034
cc9	2	7	4.71	1.187	-.053	-.569
cc10	1	7	4.17	1.380	.122	.064
cc11	2	7	4.58	1.192	.147	-.553
cc12	2	7	4.57	1.193	.179	-.210
cc13	3	7	5.21	1.062	.112	-.843
cc14	3	7	5.07	1.170	.228	-1.017
cc15	3	7	5.33	1.201	.093	-1.408
cc16	2	7	5.28	1.271	.020	-1.156
cc17	2	7	4.91	1.224	-.089	-.608
cc18	2	7	4.59	1.157	.009	-.314
cc19	2	7	4.59	.955	.532	.525
cc20	3	7	5.36	1.111	-.031	-.957
cc21	2	7	5.29	1.164	-.279	-.500
cc22	2	7	4.93	1.075	-.329	-.086
cc23	2	7	4.95	1.142	-.336	.077
eper1	2	7	4.35	1.175	-.048	-.277
eper2	2	7	4.46	1.173	.074	-.343
eper3	1	7	4.58	1.166	-.025	.485
eper4	2	7	4.58	1.007	.599	.455
cper1	3	7	5.00	.980	.524	-.491
cper2	3	7	5.12	.993	-.075	-.637
cper3	2	7	4.96	1.076	-.052	-.396
cper4	3	7	5.12	.952	.044	-.977

5. Analysis and Results

Regression analysis was conducted to test the hypotheses. It is a “statistical technique used to analyze the relationship between a single dependent variable and several independent variables” (Hair Jr. et al. 2010, 155). This helps me determine the likelihood and probability of my inferences, and make more accurate conclusions about the relationships suggested in the research model (George and Mallery 2011).

I applied IBM SPSS Statistics 20 to perform the regression analysis. Based on the factor loadings in the single-factor measurement models, I made new variables in SPSS: *resource slack, experience, training, contracting capabilities, term specification and writing, contract adaptation, internal organizing, relationships development and maintenance, economic export performance and customer export performance*.

Also, some variables are included that I was not able to test by the use of measurement models. These variables are: *age of firm, size of firm, internal consult and external consult*. The confidence interval is set at 0,95 %. I apply Adjusted R Square as an indicator of how much variance is explained by the regression equation and an indication of fit between dependent and independent variables (Green and Salkind 2011).

In this chapter I have decided to make a distinction between economic export performance (EPER) and customer export performance (CPER) as dependent variables. This is done to be able to make statistical valid conclusions about financial, as well as relationship performance. They are presented separately in chapter 5.2 and 5.3.

Further, I want to check the individual impact of the dimensions in the contracting capabilities construct on economic export performance and customer export performance. Term specification and writing, contract adaptation, internal organizing, and relationship development and maintenance are therefore included as separate independent variables in the last two regressions.

The hypotheses presented in chapter 3 are repeated in table 5.1.

Table 5.1: Hypotheses

H1a:	The more company resources available for export activities, the higher the level of contracting capabilities.
H1b:	The more experience in negotiating, writing and using contracts, the higher the level of contracting capabilities.
H1c:	The older the age of firm, the higher the level of contracting capabilities.
H1d:	The larger the firm size, the higher the level of contracting capabilities.
H1e:	The higher degree of internal consult applied in contracting activities, the higher the level of contracting capabilities.
H1f:	The higher degree of external consult applied in contracting activities, the higher the level of contracting capabilities.
H1g:	The higher the degree of employee training in contractual work, the higher the level of contracting capabilities.
H2a:	The higher the level of contracting capabilities, the higher is economic firm performance.
H2b:	The higher the level of contracting capabilities, the higher is relationship firm performance.

5.1. Model Estimation of Contracting Capabilities as the Dependent Variable

I ran regression analysis to assess the effects firm characteristics have on contracting capabilities. Resource slack, experience, age of firm, size of firm, internal consult, external consult and training are the independent variables. Contracting capabilities is the dependent variable. This allows me to test hypotheses H1a, H1b, H1c, H1d, H1e, H1f, and H1g. The regression can be stated as follows:

$$\text{Contracting Capabilities} = a_0 + a_1 \times \text{resource slack} + a_2 \times \text{experience} + a_3 \times \text{age of firm} + a_4 \times \text{size of firm} + a_5 \times \text{internal consult} + a_6 \times \text{external consult} + a_7 \times \text{training} + e$$

From table 5.2 I see that the value under revision, the Adjusted R Square is 0,263. This means that 26,3 % of the variation in the dependent variable is

explained by the independent variables (Hair Jr. et al. 2010). This suggests that other factors not included in the model might have an impact on the dependent variable.

Table 5.2: Model summary. Contracting capabilities as dependent variable.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.576 ^a	.332	.263	16.59319

a. Predictors: (Constant), resource slack, experience, age of firm, size of firm, internal consult, external consult, training
 b. Dependent Variable: contracting capabilities

From the ANOVA table (table 5.3), I can see that the regression is statistically significant with p-value = 0, at 0,05 significance level.

Table 5.3: ANOVA. Contracting capabilities as dependent variable.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	9305.711	7	1329.387	4.828	.000 ^b
Residual	18722.710	68	275.334		
Total	28028.421	75			

a. Dependent Variable: contracting capabilities
 b. Predictors: (Constant), resource slack, experience, age of firm, size of firm, internal consult, external consult, training

5.1.1. Hypotheses

I now evaluate the independent variables measuring characteristics of firms based on the coefficient table. It allows me to see the variables combined, and thus test the hypotheses associated.

Table 5.4: Coefficients. Contracting capabilities as dependent variable.

Model	Unstandardized Coefficients		Std. Coefficients	t	Significance	Collinearity Statistics	
	B	Std. Error				Beta	Tolerance
(Constant)	80.321	10.200		7.875	.000		
Resource slack	-.458	.471	-.103	-.972	.334	.881	1.135
Experience	1.914	.670	.361	2.858	.006	.617	1.622
Age of firm	-.108	.066	-.176	-1.645	.105	.859	1.164
Size of firm	.000	.001	.048	.410	.683	.726	1.378
Internal consult	.509	.602	.093	.845	.401	.819	1.221
External consult	1.156	.899	.132	1.286	.203	.931	1.074
Training	.511	.350	.181	1.461	.149	.638	1.567

a. Dependent Variable: contracting capabilities

From table 5.4 I see that only one of the independent variables is significant on the level of contracting capabilities, namely experience ($0,006 < 0,05$). The relationship is positive. Hypothesis *H1b* is thus supported. The beta value for standardized coefficients of experience (0,361) is the largest contribution in explaining contracting capabilities.

From the coefficients table (table 5.4) I see that none of the following variables are significant in explaining contracting capabilities: resource slack ($0,334 > 0,05$), age of firm ($0,105 > 0,05$), size of firm ($0,683 > 0,05$), internal consult ($0,401 > 0,05$), external consult ($0,203 > 0,05$) or training ($0,149 > 0,05$) This means that *hypotheses H1a, H1c, H1d, H1e, H1f and H1g* are not supported.

The following regression equation is made based on the beta values for unstandardized coefficients:

$$\text{Contracting Capabilities} = 80,321 - 0,458 \times \text{resource slack} + 1,914 \times \text{experience} - 0,108 \times \text{age of firm} + 0 \times \text{size of firm} + 0,509 \times \text{internal consult} + 1,156 \times \text{external consult} + 0,511 \times \text{training}$$

For the significant variable, the regression equation shows that by increasing experience with 1, contracting capabilities increase with 1,914.

5.1.2. Multicollinearity

Multicollinearity is an expression of the relationship between more than two independent variables (Hair Jr. et al. 2010, 156). It is used to improve prediction of the dependent variable. "To maximize prediction from a given number of independent variables, the researches should look for independent variables that have low multicollinearity with the other independent variables but also have high correlations with the dependent variable" (Hair Jr. et al. 2010, 166).

Based on the correlations table (table 5.5), I checked whether the independent variables in my model had relationships with other independent variables. This was not detected. When I looked at the correlations between the independent

variables and the dependent variable I saw that experience (0,497) shows the highest correlation with contracting capabilities. The variable showing the lowest correlation is resource slack.

Further, collineary diagnostics with tolerance values and variance inflation factors (VIF) were analyzed to see whether multicollinearity was present. Multicollinearity is not present if tolerance values are above 0,10 and VIF values below 10 (Hair Jr. et al. 2010). I see from table 5.4 that all the tolerance values are above required level and the VIF values satisfactory low. Hence, I conclude that multicollinearity is not present.

Table 5.5: Correlations. Contracting capabilities as dependent variable.

	Contracting capabilities	Resource slack	Experience	Age of firm	Size of firm	Internal consult	External consult	Training
Contracting capabilities	1.000							
Resource slack	-.020	1.000						
Experience	.497	.195	1.000					
Age of firm	-.177	.200	-.033	1.000				
Size of firm	.124	.160	.248	.249	1.000			
Internal consult	.181	-.086	.145	-.011	.379	1.000		
External consult	.219	.053	.173	-.044	-.108	-.070	1.000	
Training	.376	.226	.563	.143	.145	.088	.187	1.000

5.2. Model Estimation of Economic Export Performance as the Dependent Variable

I estimated the model where the dependent variable was economic export performance and the independent variables were the contracting capabilities dimensions: term specification and writing, contract adaptation, internal organizing, and relationship development and maintenance. This estimation enabled me to test hypothesis H2a. The regression can be stated as follows:

$$\text{Economic Export Performance} = a_0 + a_1 \times \text{term specification and writing} + a_2 \times \text{contract adaptation} + a_3 \times \text{internal organizing} + a_4 \times \text{relationship development and maintenance} + e$$

The model summary (table 5.6) shows that the adjusted R^2 is 0,176. This means that the independent variable explains 17,6% of the total variance in economic export performance. This percentage is not very high, but it seems logic that economic export performance is influenced by a number of factors, not just contracting capabilities.

Table 5.6: Model summary. Economic export performance as dependent variable.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.469 ^a	.220	.176	3.57330

- a. Predictors: (Constant), term specification and writing, contract adaptation, internal organizing, relationship development and maintenance
- b. Dependent Variable: economic export performance

From the ANOVA table below (table 5.7), I see that the regression is statistically significant with p-value = 0,001, at the 0,05 significance level.

Table 5.7: ANOVA. Economic export performance as dependent variable.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	255.794	4	63.949	5.008	.001 ^b
Residual	906.561	71	12.768		
Total	1162,355	75			

- a. Dependent Variable: economic export performance
- b. Predictors: (Constant), term specification and writing, contract adaptation, internal organizing, relationship development and maintenance

5.2.1. Hypotheses

I follow the same procedure as in chapter 5.1.1 and evaluate the effects of each of the independent variables in the model. This is shown in the coefficients table (table 5.8).

Table 5.8: Coefficients. Economic export performance as dependent variable.

Model	Unstandardized Coefficients		Std. Coefficients		Significance	Collinearity Statistics	
	B	Std. Error	Beta	t		Tolerance	VIF
(Constant)	8.323	2.506		3.322	.001		
Term specification and writing	-.061	.090	-.118	-.681	.498	.364	2.751
Contract adaptation	-.086	.101	-.157	-.855	.396	.327	3.055
Internal organizing	.506	.179	.487	2.828	.006	.371	2.699
Relationship development and maintenance	.266	.138	.268	1.933	.057	.572	1.747

- a. Dependent Variable: economic export performance

I see that one variable has a significant influence on the dependent variable economic export performance; internal organizing ($0,006 < 0,05$). This indicates that internal organizing related to contractual work has a positive relationship with firm performance. The other three dimensions of contracting capabilities show insignificant values. Hence, *hypothesis H2a is partially supported*. I also see that internal organizing provides the largest contribution in explaining economic export performance (0,487).

The coefficients table also shows that none of following variables are significant in explaining economic firm performance: term specification and writing ($0,498 > 0,05$), contract adaptation ($0,396 > 0,05$) or relationship development and maintenance ($0,057 > 0,05$).

The following regression equation is made based on the beta values for unstandardized coefficients:

$$\textit{Economic Export Performance} = 8,323 - 0,061 \times \textit{term specification and writing} - 0,086 \times \textit{contract adaptation} + 0,506 \times \textit{internal organizing} + 0,266 \times \textit{relationship development and maintenance} + e$$

For the significant variable, the regression equation shows that by increasing internal organizing by 1, economic export performance increases by 0,506.

5.2.2. Multicollinearity

From the correlations table below (table 5.9), I see that all tolerance values are above 0,10 and all VIF values below 10. I also see that internal organizing shows the highest correlation with the dependent variable economic export performance.

Further, the results show that some of the contracting capabilities dimensions have high correlations between each other (0,650 – 0,779). Because of the high correlations between these dimensions I am concerned that multicollinearity might be an issue. However, these variables all measure dimensions of the same construct and assumed to be correlated. The option of measuring all contracting

capabilities items together and not as four independent variables would not cause this problem, but then again I would not be able to determine their individual significance.

Table 5.9: Correlations. Economic export performance as dependent variable.

	Economic export performance	Term specification and writing	Contract adaptation	Internal organizing	Relationship development and maintenance
Economic export performance	1.000				
Term specification and writing	.263	1.000			
Contract adaptation	.265	.701	1.000		
Internal organizing	.412	.650	.779	1.000	
Relationship development and maintenance	.343	.652	.467	.463	1.000

5.3. Model Estimation of Customer Export Performance as the Dependent Variable

I estimated the final model where the dependent variable was customer export performance and the independent variables were the contracting capabilities dimensions: term specification and writing, contract adaptation, internal organizing, and relationship development and maintenance. This enables me to test hypothesis H2b. The regression can be stated as follows:

$$\text{Customer Export Performance} = a_0 + a_1 \times \text{term specification and writing} + a_2 \times \text{contract adaptation} + a_3 \times \text{internal organizing} + a_4 \times \text{relationship development and maintenance} + e$$

The model summary (table 5.10) shows that the adjusted R² is 0,220. This means that the independent variables explain 22 % of the total variance in customer export performance.

Table 5.10: Model summary. Customer export performance as dependent variable.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.512 ^a	.262	.220	3.16950

- a. Predictors: (Constant), term specification and writing, contract adaptation, internal organizing, relationship development and maintenance
- b. Dependent Variable: customer export performance

From the ANOVA table (table 5.11), I see that the regression is statistically significant with p-value = 0, at the 0,05 significance level.

Table 5.11: ANOVA. Customer export performance as dependent variable.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	252.792	4	63.198	6.291	.000 ^b
Residual	713.247	71	10.046		
Total	966.039	75			

a. Dependent Variable: customer export performance
 b. Predictors: (Constant), term specification and writing, contract adaptation, internal organizing, relationship development and maintenance

5.3.1. Hypotheses

I follow the same procedure in chapter 5.1.1 and evaluate the effects of the independent variables in the model. This is shown in the coefficients table below (table 5.12) and enables me to test the last hypothesis.

Table 5.12: Coefficients. Customer export performance as dependent variable.

Model	Unstandardized Coefficients		Std. Coefficients		Significance	Collinearity Statistics	
	B	Std. Error	Beta	t		Tolerance	VIF
(Constant)	10.169	2.223		4.576	.000		
Term specification and writing	-.029	.080	-.060	-.357	.722	.364	2.751
Contract adaptation	-.061	.090	-.121	-.678	.500	.327	3.055
Internal organizing	.462	.159	.488	2.913	.005	.371	2.699
Relationship development and maintenance	.223	.122	.247	1.831	.071	.572	1.747

a. Dependent Variable: customer export performance

From the coefficients table (table 5.12), I see that only one independent variable is statistically significant on the dependent variable customer export performance, namely internal organizing ($0,005 < 0,05$). Internal organizing in contractual work has a positive relationship with customer export performance, hence *hypothesis H2b is partially supported*. Looking at the Beta column in standardized coefficients, I also see that internal organizing make the largest contribution in explaining customer export performance (0,488).

The coefficients table also shows that none of the following variables are significant in explaining relationship firm performance: term specification and writing ($0,722 > 0,05$), contract adaptation ($0,5 > 0,05$) or relationship development and maintenance ($0,071 > 0,05$).

The following regression equation is made based on the beta values for unstandardized coefficients:

$$\text{Customer Export Performance} = 10,169 - 0.029 \times \text{term specification and writing} - 0,061 \times \text{contract adaptation} + 0,462 \times \text{internal organizing} + 0,223 \times \text{relationship development and maintenance} + e$$

For the significant variable, the regression equation shows that by increasing internal organizing by 1, customer export performance will increase by 0,462.

5.3.2. Multicollinearity

Since the same independent variables are applied for the regression in chapter 5.3 as in chapter 5.2, the correlations between them are the same (table 5.13). Thus, the high correlations between the contracting capabilities dimensions are still an issue. However, as explained in chapter 5.2.2 they are highly correlated because they measure the same construct.

Again I see that internal organizing has the highest correlation with the dependent variable customer export performance (0,469). The tolerance and VIF values fit the criteria.

Table 5.13: Correlations. Customer export performance as dependent variable

	Customer export performance	Term specification and writing	Contract adaptation	Internal organizing	Relationship development and maintenance
Customer export performance	1.000				
Term specification and writing	.333	1.000			
Contract adaptation	.332	.701	1.000		
Internal organizing	.469	.650	.779	1.000	
Relationship development and maintenance	.377	.652	.467	.463	1.000

Table 5.14 summarizes the results from chapter 5. The table provides an overview of which of the hypotheses that are supported by the empirical data and which that are not supported

Table 5.14: Results of hypotheses

H1a:	The more company resources available for export activities, the higher the level of contracting capabilities.	Not Supported
H1b:	The more experience in negotiating, writing and using contracts, the higher the level of contracting capabilities.	Supported
H1c:	The older the age of firm, the higher the level of contracting capabilities.	Not Supported
H1d:	The larger the firm size, the higher the level of contracting capabilities.	Not Supported
H1e:	The higher degree of internal consult applied in contracting activities, the higher the level of contracting capabilities.	Not Supported
H1f:	The higher degree of external consult applied in contracting activities, the higher the level of contracting capabilities.	Not Supported
H1g:	The higher the degree of employee training in contractual work, the higher the level of contracting capabilities.	Not Supported
H2a:	The higher the level of contracting capabilities, the higher is economic firm performance.	Partially Supported
H2b:	The higher the level of contracting capabilities, the higher is relationship firm performance.	Partially Supported

6. Discussion

As an extension to prior research on formal contracts, this thesis investigates how firms use contracts in their business. In this chapter, the results from the empirical study are discussed, and concise answers to the four research questions presented in chapter 1.1 are given. Finally, theoretical contributions and managerial implications are discussed.

6.1. Summary of Findings

In this section the results from the study are presented and answers to research questions discussed. This is supplemented with findings from the qualitative interviews in chapter 4.2.3.

In this thesis I investigate contracting capabilities from the sellers' perspective of the buyer-seller dyad. The results should therefore be interpreted accordingly, because the buyers' perspective might be different.

My first research question was to determine how contracting capabilities could be measured. The empirical analysis indicates that contracting capabilities can be measured with 23 different items. These items can be divided into four dimensions; (1) term specification and writing; (2) contracting adaptation; (3) internal organizing; and (4) relationship development and maintenance. For a full list of the items according to dimensions see table 4.3 - 4.6. The informants in the qualitative interviews support that these 23 items may be used to measure ability and capacity to perform tasks related to the contracting process.

In the measurement evaluation chapter (chapter 4.10) I found that the tests I was able to conduct on the contracting capabilities measures were satisfactory with regards to model fit, validity and reliability.

My second research question was to determine how contracting capabilities could be developed. This question can be directly linked to the first research question where it was determined how contracting capabilities can be measured and what activities the construct involves. It can be argued that to develop

contracting capabilities, firms need to develop their ability and capacity to perform the 23 activities defined as the answer to the first research question. Also as suggested in the next section for the third research question, firms can develop contracting capabilities as they gain experience.

My third research question was to determine if there are firm characteristics positively related to contracting capabilities. In chapter 3.1 it is argued that firm characteristics associated with higher contracting capabilities are: resources, experience, higher age of firm, larger size of firm, internal consult, external consult, and training procedures. Being in possession of these characteristics can provide higher ability and capacity to conduct contractual processes within organizations.

I find that companies with more experience from contractual work and formal contracts have higher contracting capabilities than companies without this experience. This indicates that contracting capabilities develop as firms learn from previous mistakes and engage in more contractual relationships.

I do not receive support for the propositions that the following firm characteristics have an impact on contracting capabilities: resources, age of firm, size of firm, internal consult, external consult and training.

My fourth research question was to determine if contracting capabilities are positively associated with firm performance. The empirical analysis shows that one of the contracting capabilities dimensions, internal organizing, has significant impact on firm performance. Internal organizing is positively associated with both economic- and relationship firm performance.

Internal organizing is measured with four items in the survey. Thus the items found to have a positive influence on firm performance are: internal delegation of roles and responsibilities during the contracting process, conducting financial analyses to evaluate profitability of transactions and relationships, understanding how contracts should be adapted to companies products, and understanding how contracts should be adapted to companies value chain and activities.

The qualitative interviews supports these internal organizing items as positively associated with firm performance. First, I found that there was no coincidence that the informants I spoke to were responsible for contracts with exchange partners in their respective companies. This was a careful choice based on their education, experience and status at the firm. This supports that companies delegate roles and responsibilities within their organization to enhance contractual performance.

Secondly, the second informant stated that financial analyses were always conducted in their company to evaluate profitability of transactions and relationships.

Finally, the informants from the last two interviews both argued that understanding of how contracts should be adapted to companies' products, value chain and activities is an aspect of contracting capabilities with positive performance implications. As explicitly stated by one of the informants, companies need to know their own organization to succeed.

The following dimensions of contracting capabilities show no statistical relationship with firm performance: term specification and writing, contract adaptation, and relationship development and maintenance. Thus, only one out of the four contracting capabilities dimensions shows a statistical significant relationship with firm performance.

The four research questions collectively answers my problem statement: *How can contracting capabilities be measured and developed, and how do they impact firm performance in B2B relationships?*

6.2. Theoretical Contributions

In this chapter the theoretical background for my research questions are compared to my findings presented in chapter 6.1. The aim is to evaluate if my findings adds to-, supports- or contradicts previous research. This thesis provides four main theoretical contributions.

Existing research is limited considering the effects of contracting capabilities (Argyres and Mayer 2007). The area of measuring and developing contracting capabilities has received even less focus in contracting literature. Existing research has mainly focused on specification of contract terms as a way to enhance contractual performance (e.g. Mayer and Argyres 2004, Weber and Mayer 2005; Mooi and Ghosh 2010).

Based on research by Argyres and Mayer (2007), I developed a research model where I first examined if seven defined firm characteristics have a positive influence on contracting capabilities. Thereafter I investigated the effects contracting capabilities have on firm performance. To my knowledge no research has examined contracting capabilities in the Norwegian industry, more specifically production of equipment and vehicles (chapter 4.4). This thesis therefore holds several important contributions and extends current contracting literature. The theoretical contributions of this thesis are elaborated in the next sections.

A theoretical contribution is that prior research has focused on what firms need to be good at to succeed with formal contracts, abilities that can be translated into contracting capabilities (e.g. Argyres and Mayer 2007; Mayer and Argyres 2004; Weber and Mayer 2005). I extend this line of research and developed item measures on how contracting capabilities can be measured.

I also apply these items in a study to measure firms' capabilities. My findings suggest that contracting capabilities can be measured with 23 items divided into four dimensions; term specification and writing, contract adaptation, internal organizing, and relationship development and maintenance.

A second contribution is that Argyres and Mayer (2007) argue that contracting capabilities mainly relates to designing formal written contracts. My findings suggest that preparation and follow-up of formal contracts should be included as a part of the contracting capabilities measure as well. This supports Weber and Mayer's (2005) view of contract negotiations as an important part of contracting

capabilities. Rigault's (2010) view on contract enforcement as an important part of the contracting process also receives support.

A third contribution is that I fill a gap in the literature by examining traits of firms to identify firm characteristics positively associated with contracting capabilities. My findings suggest that more experienced firms have higher contracting capabilities. This supports Mayer and Argyres's (2004) view of contracting as a learning process, where firms develop their contracting skills as they engage in more contractual relationships and learn from previous mistakes.

A fourth contribution is that I add to contracting literature by empirically investigating firm performance as a consequence of contracting capabilities. My findings suggest that firms with contracting capabilities related to internal organizing have higher performance. This supports Argyres and Mayer's (2007) view of internal organizing and human resource allocation as a way to exploit capabilities and competencies in the organization for a competitive advantage.

This thesis presents a way for firms to enhance their performance by developing their contracting capabilities. The results from the analysis show that internal organizing of activities related to contractual work positively influence firms' performance, both economic- and relationship performance. If firms succeed with internal organizing of their activities in the contracting process, they can develop contracting capabilities and enhance performance.

6.3. Managerial Implications

The context of this thesis is highly relevant due to the present situation in international business. Norwegian industry is facing new requirements due to increased competition, and companies need to develop sustainable competitive advantages to perform in the market. Companies must therefore manage their exchange relationships in ways that extract the most value from contracts as well as relationships.

The results presented in this thesis have three main implications for managers. A managerial implication is that suppliers that apply formal contracts to their exchange relationships should aim to gain more experience with formal written contracts. Tenure with contracts is an advantage, but difficult to provoke. Gaining in-depth expertise on how to successfully perform activities related to contractual work can however be a manageable target for firms.

Suppliers should ensure proficiency by learning from previous mistakes in contracts and relationships. Evaluation of contractual relationships and identification of best practices is therefore recommended. The results from the analysis show that competent employees with previous experience from contractual work are positively associated with contracting capabilities.

A second implication is that companies can enhance their performance if they manage their internal organizing successfully during the contracting process. This management practice is a contracting capability with positive performance implications.

Internal organizing is important because companies need to exploit the full potential of their staff when they negotiate, write and follow-up formal written contracts. Companies operate in competitive environments and deal with a number of contingencies that could affect their exchange relationships. Firms should therefore make sure that they are represented in best possible way when they engage in trading relationships to sustain a competitive advantage.

Financial analysis is a part of internal organizing where the financial status of companies' is evaluated before committing to contracts. Financial analyses can be conducted to evaluate the profitability of transactions in two ways. First, these analyses can be conducted to exclude unprofitable transactions and relationships. Secondly, financial analyses can identify projects with highest returns. Rating projects based on returns is important if companies have limited resources and need to choose among projects.

Suppliers should aim at adapting contract terms to their firm's individual features. The features examined in this thesis are products, value chain and activities. Adapting contract terms to these features ensures that contracts are more suited to fit company needs.

A third managerial implication relates to the applicability of contracting capabilities measures. The measurement scale is suitable as an evaluation criterion. This implies that companies can apply the scale to evaluate their performance along the contracting capabilities dimension. It enables companies to assess their strengths and weaknesses in contractual work. This is important because it facilitates the development of contracting capabilities.

These findings should motivate managers to develop contracting capabilities, and by doing so strengthen their abilities and capacity to perform contracting activities. This might lead to a sustainable competitive advantage and enhanced performance.

7. Limitations and Future Research

There are several limitations present in this thesis. My aim was to provide knowledge for future research in the area of contracting capabilities. To my knowledge, this thesis is the first to measure firms' level of capabilities. The item measures for the contracting capabilities construct used in the study are therefore new. A limitation concerning this construct is that I did not conduct pre-tests for the new item measures used. Pre-test are also not conducted for the constructs experience or training.

Another imperfection of my study is that one of the items measuring resource slack (res1) had to be removed due to poor performance in the measurement evaluation. All measures worked well, with the exception of term specification and writing (SKCC) and contract adaptability (ADCC). I occurred some difficulties with the confirmatory factor analysis due to the high number of items for the terms specification and writing, and contract adaptation constructs. As I was not able to control for cross correlations with other constructs or check for discriminant validity on these constructs, the conclusions concerning term specification and writing, and contract adaptation are not complete.

Endogeneity was not taken into consideration so other factors than those measured here can influence the constructs. For instance, since all questions are framed based on firms' perceptions of their abilities and capacities they can be based on different factors not controlled for in my thesis. An example is if firms have different perceptions of what the industry standard is they can over/under estimate their own performance.

Another limitation in this thesis is that the findings and results from the regressions show support for relationships between the constructs, which performed worst in the methodology section. I received support for my proposition of experience as a positive influence on contracting capabilities. However, I also see that one of the items measuring experience is subject to a low factor loading and the construct as a whole has a low AVE. This indicates that a low proportion of variance is explained by the latent factor structure.

I also show concern for the multicollinearity issues between the dimensions of the contracting capabilities construct. Their high correlation values can be explained by the fact that they are set to measure the same construct, but still multicollinearity might be an issue.

I only investigate the supplier side of the transaction relationships. Time and resource constraints limited my focus to the supplier's side, and the supplier's perception of the relationship. Therefore, the constructs relationship development and maintenance, and customer export performance have results based on the suppliers' perception of the buyer, not the buyers' own perceptions. This is a limitation. Future research should therefore aim to look at both sides to get more generalizable conclusions.

All the results provided are context dependent hence I am not able to generalize the findings to other industries and countries. The results are therefore only generalizable to export firms operating in Norway within the industries of *production of machinery and equipment for general use (NACE industry 28)*, *production of motor vehicles and trailers (NACE industry 29)*, and *production of other transport vehicles (NACE industry 30)*. It would be interesting to conduct this study in different industries and countries to see if the results provided here are applicable in different contexts. A larger sample of firms would also be of interest.

Contracting capabilities are relevant for all companies when they trade and apply formal contracts to govern these transactions. Based on their significant implications for firms' contractual performance, I argue that this topic needs further research and empirical testing. The construct is complicated, and may be subject to other relationships than the ones suggested in this thesis. The possibility that some of the contracting capabilities dimensions e.g. internal organizing, actually are antecedents to formal contracting should also be considered. Additional testing of item measures on contracting capabilities should be conducted, thus to further develop the measurement scale.

8. References

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9. Appendices

Appendix 1: Preliminary Master Thesis Report

Appendix 2: Cover Letter and Survey

Appendix 3: Norwegian Social Science Data Services

Appendix 4: Template for Reminder Mail 1 and 2

Appendix 5: First-order Measurement Models

Appendix 6: Second-order Measurement Model