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School of Business

International Marketing Management (MIMM)

Mikko Laaksolahti

VALUE CREATION THROUGH BUSINESS MODEL IN INTERNATIONAL ENTREPRENEURSHIP

Examiners/Supervisors: Professor Liisa-Maija Sainio

Professor Sami Saarenketo

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Mikko Laaksolahti
Ohtarontie 43
45130 Kouvola
+358 40 5460 771
Mikko.Laaksolahti@lut.fi

ABSTRACT

Author:	Mikko Laaksolahti
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Business model in the context of international entrepreneurship is a rather new topic in academic literature. The objective of this thesis is to examine value creation through business models in internationally entrepreneurial firms. The study examines value creation through the two partner interfaces and the customer interface of a company. Central for the study is the consideration of also the partners' incentives.

Business model construct is studied by defining the concept, examining its elements and the relationship with strategy – concluding with value creation through the concept. The international entrepreneurship chapter focuses on internationally entrepreneurial firms, inspecting the drivers behind international entrepreneurship and studying value network concept. Value creation functions as a driving theme in the theory discussion.

The empirical research of the study focuses on eight Finnish internationally entrepreneurial software companies. The study is conducted as a qualitative cross-case analysis building on the single case company business model analyses. The findings suggest that the business models of software companies incorporate vast similarities. However, the degree of international experience has influence on the companies' value creation and the way they organize their activities both in upstream and downstream of the value chain.

TIIVISTELMÄ

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Liiketoimintamalli kansainvälisen yrittäjyyden kontekstissa on varsin uusi teema akateemisessa kirjallisuudessa. Tämän tutkielman tarkoitus on tutkia kansainvälisesti yrittäjämäisten yritysten liiketoimintamalleja arvonluonnin välineenä. Tutkimus keskittyy tarkastelemaan arvonluontia yrityksen molempien partnerirajapintojen sekä asiakasrajapinnan kautta. Oleellista on myös partnereiden kannustimien huomioiminen.

Liiketoimintamalleja tutkitaan määrittelemällä käsite, tarkastelemalla sen elementtejä sekä suhdetta strategian kanssa – lopulta keskittyen arvonluontiin sen avulla. Kansainvälistä yrittäjyyttä käsitellään keskittymällä kansainvälisesti yritteliäisiin yrityksiin, tarkastelemalla ajureita kansainvälistymisen takana sekä arvoverkko käsitettä. Arvonluonti palvelee teoriakäsittelyn ajavana teemana.

Työn empiirinen osuus keskittyy kahdeksaan suomalaiseen kansainvälistä toimintaa harjoittavaan ohjelmistoyritykseen. Empiirinen tutkimus suoritetaan cross-case analyysina pohjautuen yksittäisten case-yritysten liiketoimintamallianalyyseihin. Tutkimuksen tulokset osoittavat ohjelmistoyritysten liiketoimintamallien sisältävän huomattavia yhtäläisyyksiä. Siitä huolimatta, kansainvälisen kokemuksen laajuudella havaitaan olevan vaikutusta yritysten arvonluontiin sekä toiminnan organisointiin sekä arvoketjun ylä- että alavirrassa.

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Finally it is done. Writing this thesis proved to be much harder and time consuming than I ever imagined. There were times when I might have lost my faith in this project and thought the thesis will never be finished. However, here I am.

Firstly I want to thank my two instructors Liisa-Maija Sainio and Sami Saarenketo for the help and patience. I truly appreciate the profound and specific feedback I have received from them in addition to the support during this project.

Last but not least I would like to thank my family and friends for the support on the way. I am sure I have babbled more than enough about the challenge of writing the thesis to my family and peers. Thanks for listening me and letting me clear my thoughts every once in a while.

School's out!

Kouvola, June 26, 2012

Mikko Laaksolahti

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1 INTRODUCTION

Software industry has proved to be a hot topic lasting already nearly two decades. It has been growing and gaining mindshare tremendously in the last years. By nature the industry can be described as largely international; major share of the actors in the industry will expand to international markets at some point of their life cycle – often rather rapidly after establishment. Internationalization process demands unique capabilities, resources, management skills and competitive advantage among others from companies. To create all this, a software company needs to have a business model supporting the firm's activities while creating value for customers and capturing value in return enabling the firm's existence. A company can excel in its business only through creating and capturing value.

Business models have existed as long as there has been business, but only a few decades ago the phenomenon started to acquire interest among academics. Some driving factors have been the rise of knowledge economy, the growth of the Internet, outsourcing/offshoring of business activities just to name a few (Teece, 2010). Business model was one of the great buzzwords around the dotcom boom, however, quickly losing its glamour after the fall (Magretta, 2002) only to regain interest some years later. Business models have been discussed in academic literature for the past twenty years quite actively in innovation and strategy literature but not under the domain of international entrepreneurship (Sainio et al. 2010). Nevertheless business models are considered as a unifying element of analysis, which can facilitate development of theory in the context of international entrepreneurship. Sainio et al. (2010) note that value creation across country borders is one of the keystones of international entrepreneurship. They also argue that business model construct functions as a viable tool for analyzing and understanding how exploitation of opportunities in international markets and the value creation process across the whole value chain can be organized in practice. Thus business

model construct should suit well for analyzing the value creation in international entrepreneurship.

International entrepreneurship, bridging theory from the vast research domains of international business and entrepreneurship has ascended to the consciousness of the academics recently and has gained vast attention and become prominent in recent literature but, however, still possesses plenty of ground for research. The field is rich with opportunity but is still suffering from the absence of empirical and theoretical developments that contribute in a clear manner to the integration of the antecedent disciplines of international business and entrepreneurship. (Dimitratos & Jones, 2005; Butler et al. 2010)

The expansion to global markets demands amendments into the company strategy and business model in order for them to suit into the new environment. The previous research conducted on international entrepreneurship offers only a limited view on how do companies change during the internationalization process and how this internal change is visible in their whole value chain (Sainio et al. 2010).

Technological revolution combined with ever increasing globalization has formed new competitive landscape for entrepreneurial business and created opportunities across domestic borders both in supply and customer markets (McDougall & Oviatt, 2000). Traditionally companies have aimed at positioning themselves in the value chain at the right place while providing the right products and market segments with the right value-adding services. Due to globalization, rapidly changing markets and novel technology innovations all this has changed and things have become more complex. Today companies form partner networks with companies often located in foreign countries to create a network in which the all the companies complement each other and create value by offering bundled products and service. Creating and co-producing value has grown into a strategically essential task in companies (Osterwalder, 2004). These

business networks have become one of the key sources for competitive advantage. Companies are not able to create superior product and service innovations anymore on their own due to dispersion of knowledge and technological resources resulted from organizational specialization. The growing need for efficiency and effectiveness has forced companies to rely on their business partners, therefore leading to growing dependence on their resources and capabilities (Westerlund, 2009). Succeeding in the international markets requires competent controlling of all the value-creating assets and knowledge (Oviatt & McDougall, 1994).

Despite the large number of studies concerning business models, there has been a shortage of research in the area of internationalization and market entry modes (Ojala & Tyrväinen, 2006). The importance of business models concerning value creation, in the domain of international entrepreneurship and therefore in cross-border activities, has been neglected in the literature. The aim of the thesis is to provide insights on how business model influences the value creation of companies in the software industry and how this value is created together with a partner network reaching over domestic borders.

Since the prior literature largely focuses on examining business models from the firm-internal perspective, research taking more holistic view and exploring value creation in the interfaces of the firm, both up- and downstream activities, is appropriate when discussing internationally entrepreneurial firms (Sainio et al. 2010). Also, the incentives for the transactions from the viewpoint of the partners is a theme worth researching for. Examining business model under the domain of international entrepreneurship offers a framework for researching the behavior of firms from the opportunity recognition and exploitation viewpoint (Sainio et al. 2011). In addition, business model functions as a practical framework to understand how value creation and opportunity recognition and exploitation are executed in internationalizing firms (Sainio et al. 2011).

This master's thesis is done on the premises of a joint research project Value Chain Management organized by Technology Business Research Center (TBRC), Lappeenranta University of Technology (LUT) and Turku School of Economics (TSE). The goal of the Value Chain Management research project was to model the international growth of software firms from the viewpoint of the whole value chain. Special attention on the project was put on the interfaces between company's different activities and partners. (TBRC, 2011)

1.1 Research problems

The research problems of the study focus on the internationalization of software companies and their business models along with the factors affecting selection/evolvement of the business model. The main focus of the thesis is to study how business model design affects the internationalization process and the value creation of an entrepreneurial software company. Table 1. below presents the research problems of the study.

Main research problem:	***How does business model describe the value creation of an internationalizing software firm?***
Sub-problems:	*How is value created through business model in the upstream partner interface?*
	How is value created through business model in the downstream partner interface?
	How the degree of international experience affects firm's value creation?

Table 1. The research problems

1.2 Research methodology and delimitations

The research questions and objectives of the study addressed earlier together with the lack of research in the topic create an opportunity for qualitative research, which as exploratory and flexible in nature, serves as a suitable method for the purposes of the study. Qualitative research is concerned with interpretation and understanding of the phenomena at hand, the object of interest (Eriksson & Kovalainen, 2008). Ghauri & Gronhaugh (2005) argue that qualitative research is especially relevant when prior insights about the phenomenon under scrutiny are modest, implying that qualitative research tends to be flexible and exploratory due to the "unstructured" problems. Researcher's role in qualitative analysis is to gain a holistic overview of the context of interest: its logic, arrangements, explicit and implicit rules. The research pursues to obtain data on the perceptions of the actors "from the inside" through a process of deep attentiveness, of empathetic understanding and of suspending preconceptions about the topics under investigation (Miles & Huberman, 1994).

Case study research can be by classified by its nature and objectives to exploratory, descriptive or explanatory (Yin, 2009). The nature of this thesis as an exploratory research enables therefore a possibility for a case study. Case study research has proven to be popular among business researchers due to its ability to present complex and hard-to-grasp business issues in an accessible, expressive and easy to understand format (Eriksson & Kovalainen, 2008). Case study research is often used when the research aims to explain some present circumstance (Yin, 2009). The main purpose is to investigate the case in relation to its historical, economic, technological, social and cultural context (Eriksson & Kovalainen, 2008). Questions such as "how" and "why" are answered usually within this research method. The research questions in case study research always relate to solving and understanding the case of interest: what the case is about and what can be learned by understanding the

case (Eriksson & Kovalainen, 2008). Case method is used to try to understand real-world phenomena in depth. It allows the researcher to understand complex social phenomena and to retain the holistic and meaningful characteristics of real-life events (Yin, 2009).

Stoecker (1991) has divided case study research into *intensive* and *extensive*. Intensive case study strives to understand a single case as profoundly as possible ending up with a holistic and contextualized description. This particular study is an example of extensive case study research. Extensive case study concentrates on mapping common patterns and properties across cases. It aims to elaborate, test or generate generalizable theoretical constructs by comparing several cases (Eriksson & Kovalainen, 2008). In case analysis empirical data can be collected from one or many different sources. However, in business research in-depth interviews are often used as the primary source of information. Other sources are usually used as complementary (Eriksson & Kovalainen, 2008).

The empirical study of this thesis is performed in two phases; first the individual case company analyses are formed (Appendix 1-8) and secondly, for analyzing the business models of the eight case companies the research a cross-case analysis is constructed. Cross-case analysis is often conducted to enhance generalizability of the research. Another, more fundamental explanation for the use of cross-case analysis is to deepen understanding and explanation (Miles & Huberman, 1994). Cross-case analysis often aims to compare and search for similarities and differences across cases and in contrast to theory (Eriksson & Kovalainen, 2008).

The focal research had access to the data gathered in the Value Chain Management research project. In addition to this data, the analysis conducted in this thesis also utilizes material found in case company websites to gain more thorough understanding of the companies at hand.

The analysis data has been gathered by conducting individual and group interview sessions with the key managers of the eight case companies. For the benefit of the study some of the companies' representatives were available to be interviewed multiple times. The interviews were conducted by forming open-ended question letting the interviewees to thoroughly answer the questions thoroughly on their own words. The interviews had been tape-recorded and properly transcribed. Due to confidentiality of the company information it is decided not to use the real names of the case companies, thus the companies are be renamed in a suitable manner.

The business model construct utilized in this study stresses focal firm's transaction with its external partner companies located in upstream and downstream in the value chain. This creates few desired characteristics from the case companies. All the case companies need to possess boundary-spanning exchange relationships with upstream and downstream partners; these relationships are then utilized in the internationalization process. Presence in numerous countries is viewed as obligatory as well. The companies are ought to also possess a vast experience from the internationalization process in order to be able to examine the internationalization and business model profoundly for the purposes of the thesis.

The empirical part of the thesis, more precisely the cross-case study, focuses on examining eight Finnish small-scale software companies. The context of the study is thus limited to only to software industry. The case companies are mostly in similar positions in the industry value chain providing smaller systems to system integrators or total service providers. The results emerging from this study might not be implemented directly to companies with a different position and role in the value chain. Finland being a small market for internationalizing software firms, the domestic market size may limit the generalizability of the results large open economies.

1.3 Preliminary theoretical framework

The preliminary theoretical framework of the study is presented in Figure 1. More advanced, final theoretical framework is introduced later in Chapter 3.4. *"Value creation through business model in international entrepreneurship".*

The essence of the thesis is to examine companies' value creation through the concept of business model, thus in the core of the theoretical framework of the study is the company's business model in international context including the partner networks both in up- and downstream. Essential elements in the framework are the three interfaces the software firm has where the value is created between its upstream suppliers, downstream partners and the customers. The concept of international entrepreneurship is illustrated in the preliminary framework by placing the focal company inside the domestic market and the upstream and downstream partners outside the country borders implying the cross-border activity appearing in the value network. The frameworks, both preliminary and final, build on the business model framework presented by Sainio et al. (2010).

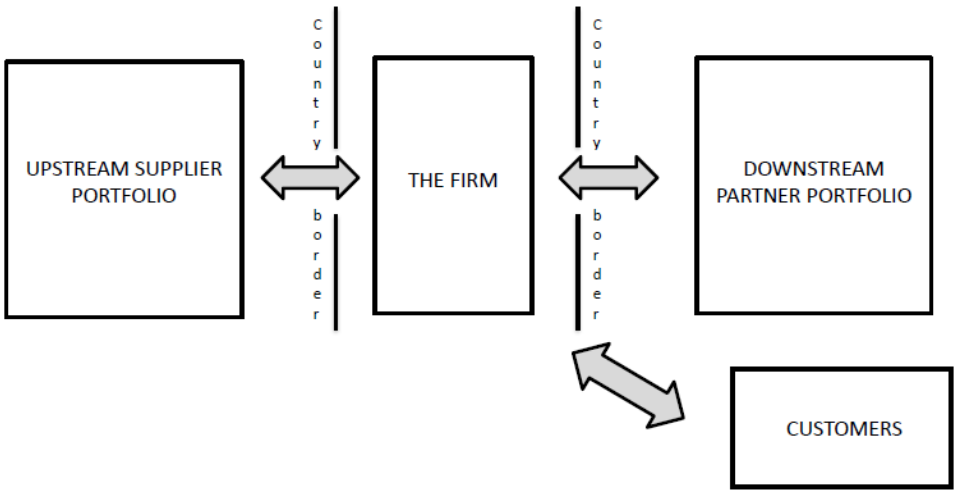

Figure 1. Theoretical framework of the study

1.4 Key concept definitions

In this chapter the core concepts of the study are presented: these concepts are business model, international entrepreneurship and value. The definitions of key concepts are needed to provide clear understanding of the context of the study. The concepts are discusses more thoroughly in Chapter 2 and Chapter 3.

Business model:

The prior literature has not been able to provide an exhaustive definition or consensus of the business model concept – only ambiguous definitions emphasizing certain aspects central to the purpose at hand. Rajala (2009) defines business model as *"a concise representation of how an interrelated set of elements – the offering, relationships, resources, revenue model, and management mind-set – are addressed to create and capture value in defined markets".* Here the infrastructure aspect and the fundamental issue of creating value and capturing it for the focal company, stakeholders and customers are stressed.

Zott & Amit (2008) define business model as a "*structural template that describes the organization of focal firm's transactions with all of its external constituents in factor and product markets".* This definition accentuates the relationship element of business model construct and draws attention to the partner network acquired by the company emphasizing the inter-firm transactions; it constructs on the resource-based view focusing on the value-adding exchanges and the fundamental resources needed to enabling the exchanges in the transactions (Sainio et al., 2010). Sainio et al. (2010) argue that this is particularly suitable to international environment; instead of focusing on trying to depict all the functions and assets of the firm it provides the possibility to contemplate value creation process as the essence of business model. On account of the suitability to international environments and the emphasis on value-

adding exchanges, and therefore value creation, this particular definition is viable for this thesis to define the business model concept.

International entrepreneurship:

Similar to business model, no exhaustive definition for international entrepreneurship has emerged from prior research. McDougall & Oviatt (2000) defined the concept as follows: *"International entrepreneurship is a combination of innovative, proactive, and risk-seeking behavior that crosses national borders and is intended to create value in organizations."* Oviatt & McDougall (2005) later introduced another definition having slightly different approach: *"International entrepreneurship is the discovery, enactment, evaluation, and exploitation of opportunities – across national borders – to create future goods and services."* Another definition describing the essence of the term well for the purposes of this particular study is presented by Styles & Seymour (2006) depicting international entrepreneurship as *"behavioral processes associated with the creation and exchange of value through the identification and exploitation of opportunities that cross national borders."* This definition accentuates the core two core concepts of this thesis: business activities across country borders and value creation. Additionally, the focus on behavioral processes and exploitation of international opportunities creates enables a good template to integrate business model concept into this context.

Value and value creation:

The concept of value can be characterized as ambiguous and is subject to discussion from many different viewpoints; the definition of value depends heavily on the context it is examined in. Value can mean different things even for the different stakeholders of a company (Bowman & Ambrosini, 2010). Porter (1985) defines value as *"the amount buyers are willing to pay for what a firm provides them"*. This indicates that value is measured

in the form of total revenue earned. In the context of the focal thesis value can be defined on the basis of Ritala (2010; adapted from Bowman and Ambrosini, 2000) as a result of a specific activity within a firm connected with distinct types of economic or other benefits for one or several of the stakeholders. Value is substantially linked with customers' perceptions of the company's outputs. Moreover, in economic context it eventually creates revenue and profits for the producer through monetary exchange.

Like value, defining value creation is not unequivocal. Kotler & Keller (2006) define the value creation process as *"the identification of customer benefits from the customer's view, utilizing the core competencies of the firm's business domain; and selecting and managing business partners from its collaborative networks in order to exploit value opportunities."* From the viewpoint of this thesis value creation is defined along the lines of Brandenburger & Stuart (1996); value creation from the perspective of a company is a collective activity combining the efforts of the players in the value chain, the upstream partners, the company and the downstream partners including also the customers of the products and services. Value creation can be viewed as an increase in customers willingness-to-pay for a company's products or as a decrease in costs of producing them. This specific definition takes the value chain (or value network) view into account incorporating all the actors in the business model into the value creation process stressing that value is not created solely by the focal firm but with all the players involved in the process and exchanged between these actors.

1.5 Literature review

This section of the study takes a look into the prior literature published about the two main themes of the thesis: business models and international entrepreneurship. The function of literature review is to provide a thorough understanding of the concepts discussed and present different views and themes examined in the academic literature.

1.5.1 Business models

The concept of business model is relatively new phenomenon emerging in the academic literature in the 1970s' for the first time. However, the term was introduced already in 1957 in an academic publication (Bellman et al. 1957). Since then academics have discussed the matter in various fields providing definitions with fundamental theoretical differences in business model and strategy conceptualization (Sainio et al. 2010). The prior literature has not been able to provide a rigorous and consistent definition of business model (Chesbrough & Rosenbloom, 2002; Sainio et al 2010) even though the concept has been discussed during the last two decades in various fields leading to numerous different definitions reflecting fundamental differences in the conceptualization of business model and strategy and emphasized in entrepreneurial practice (Sainio et al. 2010; Morris, et al. 2005). This may derive from the fact business models have been researched from numerous different perspectives, such as technology, e-business and strategy (Shafer et al. 2005). Some of the presented definitions are very narrow, only encompassing perhaps revenue model, whereas in the other end are definitions including everything a company does under the umbrella of business model. In the recent literature strategy research literature the design of superior business models has gained focus (Westerlund, 2009; Zott & Amit, 2008) Due to the lack of comprehensive and coherent definition and

understanding the concept, no agreement as to the distinctive features of superior and outperforming business models yet exist. (Casadesus-Masanell & Ricart, 2010; Morris et al. 2005).

According to academics business models lack theoretical grounding in business literature. Teece (2010) argues that business models simply do not have established space in economic theory. It also appears to lack an acceptable theoretical position in strategy and organizational studies as well as in marketing literature.

The research on business models has focused on the information and communications technology (ICT) sector (George & Bock, 2010) as well as e-commerce and Internet based models. (Demil & Lecocq, 2010; i.e. Pateli & Giaglis, 2004). One recent popular theme in business model literature has been business models innovation or more broadly changing business models (i.e. Nunes & Breene, 2011; Sosna, et al. 2010; Teece, 2010; Gambardella & McGahan, 2010; Chesbrough, 2010). Chesbrough (2010) views business model innovation vitally important but very demanding to achieve. The prior research can be described as descriptive by nature focusing on the construction of business model, their types and examining successful and failed models. (Morris et al. 2005) The academic literature has concentrated mostly on business model structures or their types, the constitution of business model itself. The antecedents or consequences of choosing certain type have not been evaluated. (Westerlund, 2009)

The relationship between business model and company strategy has aroused interest in the recent literature trying to relate and on the other hand to clarify the difference between these two concepts (Casadesus-Masanell & Ricart, 2010). Despite the popular view to note the linkage and make a distinction between strategy and business model, some authors have used these terms interchangeably (Magretta, 2002). This is partly due to the construct emerging as a term of convenience among the popular press and practice community. The lack of convergent and well-

defined theoretical construct has resulted in inconsistent empirical findings, for instance, in its effect on firm performance and organizational change (George & Bock, 2010)

Rajala (2009) has conducted a comprehensive analysis of the business model concept in scholarly articles resulting in a time-period classification reflecting the focus of business model research in during these periods. Rajala also argues that despite the confusion related to strategy and business model, the former research has gained a consensus on the position of business model as conceptual and theoretical layer between strategy and business processes. He adds that according to recent studies the business model concept includes some elements of business strategy and aims at describing the business as practical manifestation of strategy.

Zott & Amit (2007) have discussed about business model design's effect on the performance of an entrepreneurial firm. They also link business model concept to value creation and external stakeholder by expressing that business model describes how organization is linked to external shareholders and how it engages in economic exchanges with these shareholders to create value for all parties. The focus on business model literature has turned from the administrative structure of the company towards the relationships the company has with its external stakeholders.

Business model design and its elements have aroused interest in the literature in trying to analyze and categorize business models (i.e. Morris et al. 2005; Rajala, 2009; Timmers, 1998; Dubosson-Torbay et al. 2002; Hamel, 2002; Magretta, 2002) resulting in ambiguous views on the core components of the business model – no unanimous agreement on the elements has emerged. Resources, relationships, offering and revenue model have been often recognized as the main elements of the business model (Rajala, 2009), even though the literature presents several different ambiguous classifications of the components. Terms, such as business model dimensions, components, building blocks and elements have been

used to depict the same thing. Business model consists of four parameters according to Rajala (2009): (1) relationships (2) offering (3) resources (4) revenue model. Dubosson-Torbay et al. (2002) have limited relationship element to include only the interaction with the customer. Also the relationship factor is excluded in this concept and replaced with infrastructure and network of partners as the fourth element. Osterwalder (2004) has presented his model with nine parameters, which are: value proposition, the target customer, the distribution channel, the customer relationship, value configuration, capabilities, partnership, cost structure and the revenue model. One often used classification by Weill and Vitale (2001) distinguishes strategic objective, value proposition, revenue sources, critical success factors, core competencies, customer segments, channels and IT infrastructure.

Despite the fact that there exists no comprehensive and widely agreed definition of business models, some classifications can be identified from the literature (Nenonen & Storbacka, 2010). Business model definitions from the prior literature can be divided into three categories (Sainio et al. 2010); the first category is a Porterian value chain approach, where the activities of the firm are seen as flows or streams. The second category consists of definitions based on the resource-based view of the firm. Thirdly, in the most recent literature business model is connected to design or architecture value creation being in its core. Osterwalder et al. (2005) have classified the business model literature into three categories:

1. Studies, which describe the business model concept as an overarching concept that can describe all real world businesses.
2. Studies that describe a number of different abstract types of business models, each describing a set of businesses with similar characteristics.
3. Studies presenting aspects of or a conceptualization of a particular real world business model.

The relationship aspect of business model has gained interest in literature. Despite the rigorous effort on inspecting the networks and managing them, there is a shortage for knowledge on how these networks are managed as part of the firm's business model (Westerlund, 2009). Zott & Amit (2008) have studied the relationship, fit and differences between company's business model and product market strategy. They concluded that business model and product market strategy are complements, not substitutes.

1.5.2 International entrepreneurship

International entrepreneurship is a subject that has not yet been researched very thoroughly, even though lately there has been plenty of interest in the phenomenon. Zahra & George (2002) state that the term was introduced the first time by Morrow (1988) highlighting the recent technological advancements and cultural awareness that seemed to open foreign markets to foreign ventures (Oviatt & McDougall, 2005). Historically the interest of international business researchers has focused on the multinational firm but a growing interest in smaller internationalizing entrepreneurial firms has emerged (Fillis, 2007; O'cass & Weerawardena, 2009). The scope of the international entrepreneurship research field has widened since the initial work of Oviatt & McDougall (1994, 1995) who took smaller international new ventures under examination (Cumming et al., 2009). Hisrich (2009) has discussed the concept of international entrepreneurship, entrepreneurship opportunities, entering the global markets and managing the global entrepreneurial enterprise. Identification, evaluation and exploitation of entrepreneurial opportunities have been emerging themes in international entrepreneurship literature and serves as linkage between business model and international entrepreneurship. (Sainio et al. 2010; Dimitratos & Jones, 2005)

The global expansion of companies has been examined in the prior literature from the viewpoint of large multinational companies instead of entrepreneurial start-ups alongside the advantages of internationalization and firm-specific ownership. Therefore the theories concerning rapid internationalization, the internationalization process of entrepreneurial firms or the advantages emerging from global networks have remained modest (Callaway, 2004) entrepreneurial research mostly focusing on venture creation and management of domestic operations in the case of SMEs (McDougall & Oviatt, 2000). However growing interest towards the internationalization of small entrepreneurial firms has emerged in recent years (i.e. McDougall & Oviatt, 2005). More precisely the literature has largely focused on international new ventures (INVs) or so-called born globals (i.e. Oviatt & McDougall, 1994; Knight & Cavusgil, 1996) excluding corporate entrepreneurship and firms expanding to global markets in later phases of their lifespan. Oviatt & McDougall (1994) defined INVs as *"a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries".*

Two major themes in research have proved to be the internationalization of entrepreneurial companies and comparison of different cultures in the context of entrepreneurship (McDougall & Oviatt, 2000) The previous international entrepreneurship research has provided only a limited understanding on the change companies and their key business operations experience when internationalizing (Nummela et al. 2006). Unclear are also the reflections internationalization has on companies' value chains (Sainio et al. 2010). An emerging theme in the literature is the identification, evaluation and exploitation of international opportunities, which is another theme emphasizing the linkage between business models and international entrepreneurship (Dimitratos & Jones, 2005)

One of the groundbreaking articles written about international entrepreneurship was Oviatt & McDougall's "Toward a theory of

international new ventures" (1994), which introduced the theoretical basis for the study of international new ventures. They presented a framework explaining the phenomenon of international new ventures by integrating international business, entrepreneurship and strategic management theory. The framework presented four necessary elements for the existence of these international new ventures. The elements are; (1) organizational formation through internalizing of some transactions (2) strong reliance on alternative governance structures to access resources (3) establishment of foreign location advantages (4) control over unique resources. Oviatt & McDougall also presented a framework based on these elements for classifying the international ventures into four categories: export/import start-up, geographically focused start-up, global start-up and multinational trader. Autio (2005) argues that international entrepreneur's primary driver for international business activities is the value creation possibility through resources across the borders.

Ojala & Tyrväinen (2007) note that despite the interest in business models, the connection between a firm's business model and the choice of entry mode are lacking research. Sainio et al. (2010) argue that business models and value creation in international entrepreneurial firms have not been explicitly linked in prior literature. The prior literature on business models focuses mainly on firm-internal viewpoint. The article contributes to the literature by forging the links between international entrepreneurship, value creation and business model concept. Sainio et al. (2010) also note that in the context of internationally entrepreneurial firms, value creation must be examined in the interfaces of the firm.

1.6 Structure of the thesis

The thesis consists of two main theoretical chapters: Chapter 2 focuses on the business model concept and provides a view to the literature, elements and functions of business model alongside with a glance into the relationship between business model and strategy. Chapter 3 illustrates the phenomenon of international entrepreneurship. Here value networks are examined, as well as how value is created in international entrepreneurship. The chapter ends with a summarizing title where value creation through business models in international entrepreneurship is discussed.

Chapter 4 starts the empirical part of the study. Here all the case companies are shortly introduced and later analyzed thoroughly by examining and evaluating their business models. Chapter 5 presents the results and findings of the study and Chapter 6 focuses on discussing and concluding the study. The thesis finishes with a list of references in Chapter 7.

2 BUSINESS MODELS

The chapter starts with introducing the concept and moves towards more specific components, such as the elements and the functions of business models. The concept of value creation from the viewpoint of business models is studied here. Business model determines if a company creates or destroys value and in what ways (Boulton et al. 2000). Business models are representation of management thinking and certain practices that assist business organizations to view, understand and run their activities in a desired and distinct way (Chararbaghi et al. 2003)

In the “new economy” new business models are being created constantly. In these new business models relationships, knowledge, people and intangible assets, such as brands and intellectual properties are taking the limelight from more traditional tangible assets (Boulton et al. 2000) The companies that most successfully combine and leverage these assets through their business models and partner networks are the ones having the competitive advantage in the markets, and create substantial value for their customers and stakeholder (Boulton et al., 2000). Company’s business model is the single most important factor in its success or failure in the marketplace (Boulton et al. 2000); it can be a source of tremendous competitive advantage for a firm (Westerlund, 2009). However, Teece (2010) argues that innovating with business model alone will not create company-wide competitive advantage; novel or refined business models may create new value to the customers or lower costs to the firm. Successful companies have created effective business model and execute it superbly. Noteworthy is that these companies have the ability to adapt their business models to changes in the markets (Linder & Cantrell, 2000). Drivers such as globalization, deregulations and technological innovations are exhaustively changing the competitive environment all the time. In this competitive game the fastest growing businesses seem to be the ones who have taken the advantage of these structural changes to innovate their business models to be able to compete in new ways (Casadesus-

Masanell & Ricart, 2010). It is said that mediocre technology within great business model can turn out to be more valuable than great technology accompanied with mediocre business model (Chesbrough, 2010). A successful business model unveils a better way of doing things than the alternative models by offering more value to a certain group of customers or it even can radically change the industry by replacing the old models and become de facto standard in the industry until a new better solution emerges in the future (Magretta, 2002).

Business models serve many important functions in a company and have many uses. Articulating the value proposition of the company serves as the first function. Necessary is to identify the suitable market segments to whom the new technology is useful for and for what purpose. Here the decisions concerning the revenue mechanisms are also required. Defining the value chain structure is an essential task in order to create value for customers; complementary assets, third parties are often necessary for capturing the value. Given the chosen value proposition and value chain structure the company needs to estimate costs and the potential incomes provided by the offering. The company needs to describe its position within the value network – in addition it needs to recognize the potential companies providing complementing services and functions, and the competitors in the markets. Lastly, business model assists in formulating a competitive strategy for the company in order to stay competitive and ahead of the rivals. (Chesbrough & Rosenbloom, 2002)

Drucker (1985) has argued that business model should answer to questions, such as *who is the customer and what does the customer value?* Another important question is *what is the underlying economic logic that explains how the firm can deliver value to customers at an appropriate cost?* Despite the business model is always presented from a single firm's viewpoint, the concept however is not restricted to the company's boundaries but it also includes the value network consisting of the value-adding partners (Sainio et al. 2010). A company always

possesses a business model; it either employs this certain model explicitly or implicitly as the architecture of value creation, delivery and capture mechanisms. The essence of business model is in pinpointing the means by which the company delivers value to customer, allures them to pay for the offering and converts those payments to revenues for the firm (Teece, 2010).

2.1 Business model concept and definitions

The variety in the definitions available incurs fundamental obstacles for outlining the nature and construction components of business model and determining the factors, which compose a prosperous model. This also creates an issue in defining and separating concepts such as strategy, business model, business concept and revenue model, which all have been often used interchangeably. As a concept, business model lies at the theoretical and conceptual level between the concepts of strategy and process (Westerlund, 2009). Business model concept possesses some of the elements of business strategy and depicts the business itself as a manifestation of the chosen strategy and abstraction of the business activities executed in daily business (Morris et. al. 2005). Further, business model has been described in the literature as a plan, pattern, architecture, method, assumption, statement and design to create more confusion (Morris et al. 2005). Sainio et al. (2010) present that the definitions available can be divided into three groups. Some the definitions are based on Porterian value chain perspective noting that business models consist of streams or flows. Second group reflect the resource-based view (RBV) emphasizing the resource and asset aspects of business models. Thirdly, the recent literature has often viewed the concept as an architecture or design; these definitions raise the issue of value creation into the limelight.

The definitions presented in literature often approach the business model concept from different angles and stress different elements of the

construct. Zott & Amit (2001) have defined business model as depicting *"the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities".* The content of transactions refers to the goods and information exchanged along with the resources and capabilities required. Structure connects to the parties that are involved, their links and the ways they have chosen to operate. Governance describes the ways the flows of information, resources and goods are controlled by the parties involved, the legal form of organization and the incentives to the different parties (Casadesus-Masanell, 2010). The definition has been updated with a notion that a business model illustrates the way an organization is connected to its external stakeholders, and how it commits to economic exchanges with these stakeholders to create value for all partners involved in the exchange process (Zott & Amit, 2007). This update pinpoints the connection between, and the role of, the focal firm and its partner network in the value creation process. This updated definition includes a suggestion that these stakeholders and opportunities may well lie outside the domestic borders.

Zott & Amit have revised their definition even further into the form*; "business model is a structural template that describes the organization of a focal firm's transactions with all of its external constituents in factor and product markets."* It explains how a company transacts with customers, partners and vendors, and how it connects itself with product and factor market; it conceptualizes the pattern of transactional links between the firm and its exchange partners, and describes the overall "gestalt" of these interlinked cross-border transactions (Zott & Amit, 2008). This revised definition emphasizes the relationship aspect of the concept and takes the value network, the partnering companies and the value exchange between the focal firm and the partners, into the spotlight while creating a distinction with upstream and downstream activities. Value creation emerges in this definition in the form of transactions of value between the firm and the value network. The authors view business model to address

to five questions; (1) the structure of connection with factor and product markets (2) the parties needed to be connected to exploit a business opportunity and the linkage between these parties and the focal firm to enable transactions (3) the information and goods to be exchanged between the parties, and the resources and capabilities needed to establish transactions (4) controlling of the transactions between the parties (5) Incentives for the exchange partners (Zott & Amit, 2008). Zott & Amit's definition encompasses explicit contributions from several theories, such as value chain analysis, resource-based-view, Schumpeterian innovation, dynamic capabilities, transaction cost economics and strategic networks (Casadesus-Masanell & Ricart, 2010; Tikkanen et al. 2005).

Business model concept is distinct but closely related to many managerial concepts. It is closely related to strategy but it is not one. It builds from many elements of strategy, central ideas of business strategy and the theoretical traditions associated with it. Westerlund (2009) remarks that business model is not also an activity set even though activity sets support each business model element. The model represents an architectural configuration at the operational level: the focus is on processes and infrastructure design enabling the value creation. At the operational level business model decision variables encompasses knowledge management, resource flows, service delivery methods, logistical streams and administrative processes among others. Strategic level definitions of the concept emphasize cross-border interactions, growth opportunities and market positioning. (Morris et al. 2005)

Business models are organizational narratives (George & Bock, 2010) stories that explain how companies work. They are planning tools that help to link all the pieces of the business together to form a viable unity (Magretta, 2002). Linder & Cantrell (2000) define business model as company's core logic for creating value. Timmers' (1998) definition, leaning on Porterian value chain view (Sainio, et al. 2010) views business model as architecture for the product, service and information flows,

embodying a description of all the business actors and their roles. This definition includes also the potential benefits for the business actors and a description for revenue logic.

Business model can be viewed as an extension of the strategic network of the company. Business model perspective of these inter-firm cooperative arrangements sees them as an essential element to the firm's ability to create profitable transactions (Zott & Amit, 2001). Teece (2010) argues that a good business model must be more than just a great and logical way of executing business activities. It is ought to meet particular customer needs profoundly, be somewhat non-imitable for competitors and both internal and external factors are required to be incorporated in the assessing process when designing the business model.

2.2 Business model elements

Business model elements have captured the interest of numerous academics in the past resulting in several different views on the building blocks business models are built from. Despite the popularity of the topic, the proposed business model elements are largely founded on few popular components across different authors. Rajala (2009) argues that business models can be analyzed by their distinctive value-creating elements.

Morris et al. (2005) conclude the most frequently cited business model elements in the academic literature are *economic model, customer interface/relationship, partner network/roles, internal infrastructure/connected activities* and *target markets*. Osterwalder (2004) has presented a framework for business model comprising of nine building blocks, which are divided into four domains. These domains and building blocks are: (1) *product:* value proposition (2) *customer interface:* target customer, distribution channel, relationship (3) *Infrastructure management:*

value configuration, capability, partnership (4) *financial aspects:* cost structure, revenue model. Figure 2. illustrates a rather characteristic business model element framework presented by Rajala (2009). This framework identifies the core elements as *offering*, *resources and capabilities* required to execute business, *relationships* with other actors and *revenue model*.

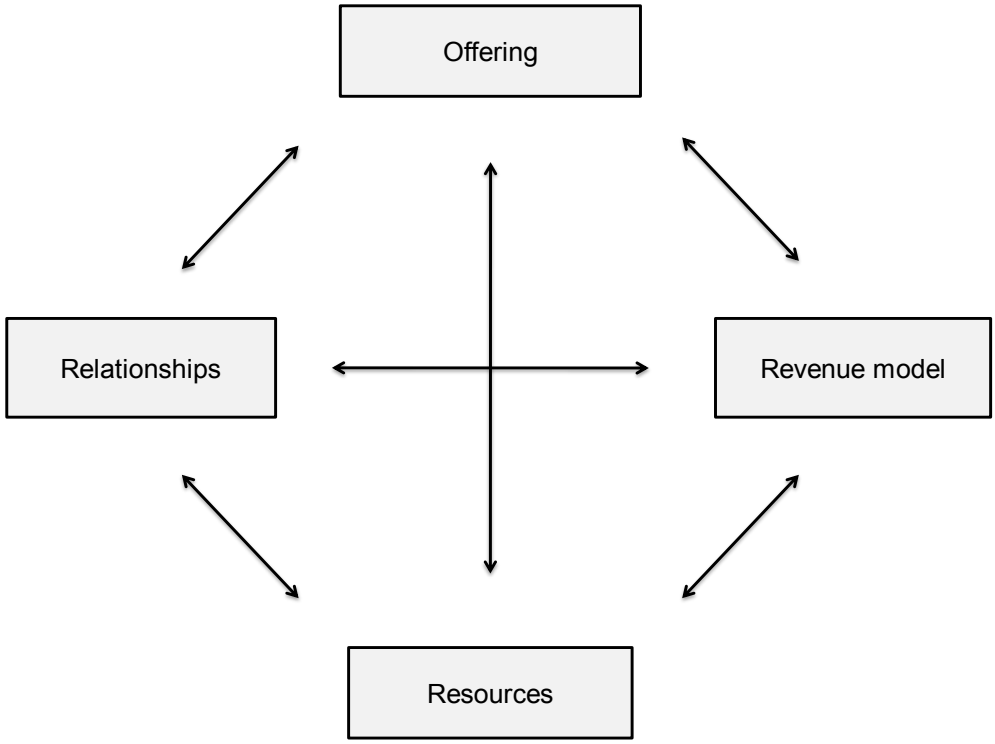

Figure 2. Business model elements (Rajala, 2009)

Offering can be viewed as the value proposition the firm offers to its customers (Rajala, 2009); more traditional view sees offering as products, services, experiences, solutions and content provided by the company (Linder & Cantrell, 2000). Decisions concerning offering could be the degree of standardization/customization of products for customers, vastness of product/service mix, the share of company's offering compared to the overall needs of customers, the role of the offering in

production or service delivery and the choices made concerning the availability of the offering for the consumers. (Rajala, 2009)

Resources can be understood as assets and capabilities, which are required in order to develop and execute a certain business model (Pateli & Giaglis, 2004; Rajala, 2009). Hamel (2002) argues that any competitive advantage worth the name is derived from unique firm-specific resources consisting of core competencies, strategic assets and core processes. Resources can be divided into usually tangible, static resources requiring actions in order to be valuable, and to intangible and dynamic resources that are capable of creating value (Nenonen & Storbacka, 2010; Vargo & Lusch, 2008). In order to be able to deliver the proposed value for customers the firm must possess the required capabilities that support value creation. In the networked economy firms tend to concentrate on their core competencies and abandon all resources and assets that are not considered as core competencies (Dubosson-Torbay, 2002). Boulton et al. (2000) emphasize the resource component of a business model; identifying and leveraging the intangible, organizational assets is the most essential factor in building a successful business model in the information age. Business models are made of several different kinds of asset portfolios, which need to interact well together for the company to succeed. All companies need to create a business model that links the combination of assets to value creation.

Relationships in the business model construct form a value-creating network, value network, of the social and interorganizational relationships vital to the business (Rajala, 2009) complementing and amplifying the firm's own resources (Hamel, 2002). Osterwalder (2005) defines partner network as cooperative agreements with other firms necessary to efficiently offer and commercialize value for customers. The partner network describes the configuration how value-creating processes are distributed among the players in the network. Relying on the partner network the focal firm can focus on its core competencies and activities in

the value creation process meanwhile leaving other activities in the hands of the partners (Dubosson-Torbay, 2002). Relationships can be divided into upstream and downstream partners, upstream partners consisting of suppliers.

Revenue model describes the company's means to capture value from its offering through employing its resources and relationships (Rajala, 2009) – it provides a consistent logic for earning profits for the firm (Morris et al. 2005). Revenue model therefore refers to the specific ways a firm generates revenues. It is the means the firm acquires some of the value created by the business model for all the stakeholders (Zott & Amit, 2010). Decisions such as revenue sources, pricing methodologies, cost structures, margins and expected volumes are included under the domain of revenue model (Morris et al. 2005). Even though the concepts of business model and revenue model are closely related and sometimes seen as synonyms they are distinct concepts. Business model is more aimed towards total value creation for all the stakeholders and it co-defines the basis for value creation together with offering. Business model thus sets the upper limit for value capturing, whereas revenue model specifies the amount of value actually captured from total share created. (Zott & Amit, 2010)

In addition to these four elements of business model, Rajala (2009) emphasizes the role of *management mind-set* as an important factor of business models. Management mind-set stresses the idea that business model is not only result of cognitive, rational thinking and planning but also an outcome of management's values, emotions and attitudes. Tikkanen et al. (2005) argue that managerial cognition should be considered as an irremovable component of the business model concept.

Sainio et al. (2011) approach business model elements from value creation perspective and propose a framework based on the conceptualization by Zott & Amit (2010). The framework consists of three

elements: (1) *value creation driver* (2) *design elements* and (3) *value exchange*. The four main value creation drivers are *novelty*, *efficiency*, *complementarities* and customer *lock-in* (Zott & Amit, 2010). These drivers are more thoroughly discussed in Chapter 2.4. Design elements describe the architecture of the business model: the variety of activities that are performed (content), how these activities are linked (structure) and what is their importance for the business model (core, supporting, peripheral), and how the activities are divided between the focal company and its partners (governance) (Zott & Amit, 2010). The third element is the value exchange at the direct interfaces with the upstream and downstream partners, and customers.

The business model element framework presented by Sainio et al. (2011) suit appropriately for this particular thesis and the preliminary business model framework presented in Chapter 1.3. This framework takes the value-creating exchange relationships into consideration in the three interfaces: supplier, seller and customer (Sainio et al. 2011). A significant difference to many other constructs is the consideration of the incentives for the partner companies to conduct business activities with the focal firm.

To exploit and take advantage of the international opportunities a company must co-operate with partners, who in return expect incentives, not just monetary compensation, from the company to engage in business activities. Important questions for the company are why the partner company wants to interact with the company and how to strengthen the relationship. (Sainio et al. 2011)

In the focal study the three business model elements are accompanied with fourth element, *resources* from Rajala's (2009) framework in order to take the in-firm resources and capabilities into higher consideration as a value-creating element in the business model construct of companies. Therefore the business model elements (Figure 3.) comprise from (1)

value creation driver (2) *design elements* (3) *value exchange* and (4) *resources*.

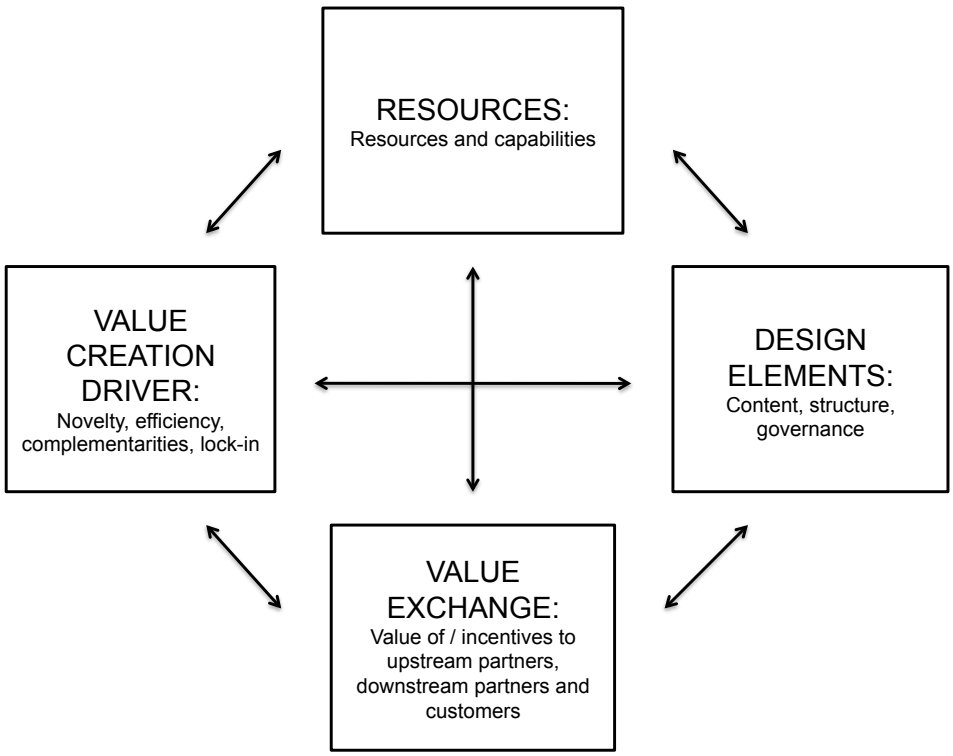

Figure 3. Business model elements for the study (Adapted from Sainio et al. 2011; Rajala, 2009)

2.3 Business model and strategy

The concepts of strategy and business model are often seen very similar. Many strategy scholars have referred to business model as “the logic of the firm”. This notification appears to be very alike with the definition of strategy (Casadesus-Masanell & Ricart, 2010). Nowadays these concepts are often used interchangeably by many scholars and academics (Magretta, 2002). Morris et al. (2005) note that business model is not strategy but includes many strategy elements. Like strategy, business

model involves analysis, testing and validation of company's strategic decisions and choices. (Shafer et al. 2005)

Business model depicts the logic of the focal company. It describes how the company operates and in which ways it creates and captures value for its stakeholders in a competitive environment. Strategy is implemented in order to create a position of value and uniqueness to the company with distinctive set of activities. Strategy as a concept implies that the organization has made a deliberate choice about competitive actions executed in the marketplace (Casadesus-Masanell & Ricart, 2011). Business model is the system of choices and consequences and reflects the strategy; it is the reflections of the realized strategy (Casadesus-Masanell & Ricart, 2010). Strategy refers to the plan made about which business model to choose and execute in the marketplace. Strategies embody preparations against possible contingencies arising from the environment. Strategy is an action plan for possible uncertainties arising from the environment. Relevant is that all enterprises have business models but not all have a strategy (Casadesus-Masanell & Ricart, 2011).

Strategy can be thought as a plot, a pattern of choices made over time in backward-looking sense. A more future-oriented view of strategy sees strategy as a plan and set of choices – a directional road map for the company. The strategic choices are the combining elements of strategy and business models: business models reflect these choices and the operational implications (Shafer et al. 2005). The function of strategy is to give meaning and directions for the development process of the business model executed by the company. Strategy is a comprehensive pattern of a company's actions and intentions, which bundles together all the elements and components of the particular business model. (Mintzberg & Waters, 1982)

Business model for one describes how the different parts of the system, the business, fit together. Business model, however does not take

competition into consideration; competition is something that strategy deals with. Competitive strategy lays out how a company achieves superior performance compared to the competitors and thus is considered different, unique by executing tasks no competitor does in ways inimitable for competitors. This is the fundamental idea behind strategy: outperforming the competition by being different. (Magretta, 2002)

Business model is more generic concept than business strategy according to Teece (2010). However academics have not found a clear consensus about the relationship between the two important concepts; completely opposite views to Teece's are possible to find in the literature. The focal study does not aim to examine and evaluate the strategic actions of the case companies therefore strategic issues are not covered in the study. The interest of the research lies in how the companies operate and have organized their business activities. Thus Magretta's (2002) perspective of strategy as a cornerstone for the competitive actions and the direction of the company, whereas business model sets the structure of company's business operations, functions as an adequate viewpoint concerning this study.

2.4 Value creation through business model

Value creation perspective started to emerge in the 1990s in academic literature gaining importance and interest in the beginning of 21th century in the context of business models. At the same time the focus shifted towards companies' external resources and interorganizational network relationships together with value activities (Westerlund, 2009; Zott & Amit, 2001)

Business model is a conceptual, rather than financial, model of business. It describes the design and architecture of value creation, its delivery and capturing mechanisms employed (Teece, 2010). At its heart business

model performs two important functions: value creation and value capturing. Business model defines series of activities resulting in satisfying the customers; throughout these various activities net value is created. A business model captures value from a portion of those activities for the firm developing and operating it (Chesbrough, 2007). A business model lays the foundation for company's value capturing possibilities by determining the possible maximum amount of value created, which can be considered as the upper-limit for the value capturing potential for the company. In the heart of value capturing is the company's pricing strategy or the revenue model, which determines how much value the company manages to gain (Zott & Amit, 2010). Zott & Amit (2008) argue that business model as a source of value, creation and capture, can explain why some businesses outperform others in the markets.

Value creation through business model occurs either by amplifying the customers' willingness to pay or by lowering the opportunity costs faced by the suppliers and partners – this may be achieved, for example, by improved transactions efficiency. The total value created by a particular business model is dependent on the market power of the competing business models in relation to the focal company's business model; the success of a single business model is relative to the viability and success of the competing business models in the market. The total value created by the business model is the value experienced by all the stakeholders of a company. Notable is that the value created is also the maximum for the company's opportunity to capture value. (Brandenburger & Stuart, 1996; Zott & Amit, 2007)

A business model depicts the logic, the data and additional evidence that support the value proposition offered for customers, and a viable and structure of revenues and cost for the company from delivering the value. Thus, business model is all about the benefit the customers receive from the company, how the company organizes this value creation and how it will capture some of this value delivered. (Teece, 2010)

Value creation is plausible within every step of company's value chain via activities that seek to result in products and services that increase the performance of the buyer, or reduce the costs for the buyer. The sources for value creation and therefore drivers for product differentiation are the policy choices (which activities to execute and how), linkages (outsourcing to partners or performing within own value chain), timing of the value-creating activities, location, sharing of the activities between business units, learning, integration, scale and institutional factors (Zott & Amit, 2001; Porter, 1985). Value creation and capturing reflect the fundamental functions to a firm in order to exist and stay competitive. Successful companies create substantial value for customers in ways that set the company apart from the competitors. This substantial value might be outcome from unique capabilities, core competencies or positional advantages; these capabilities and core competencies could be also used to perform processes and activities differentiating the firm from the competitors (Shafer et al. 2004). Firm with a distinctive business model that creates more value than the competitors' business models possesses potential competitive advantage; and all other factors being equal holds the possibility to capture more value for its shareholders (Zott & Amit, 2008).

Tensions between the business model elements creating value and the elements capturing value might emerge and cause severe challenges for the company. Proprietary technology possessing high value for the company can create tremendous amount of value but problem lies there that customers might be unwilling to obtain such technology due to high price, limited availability or service issues and so forth if existing alternative technologies satisfy their needs. (Chesbrough, 2007)

Zott & Amit (2007; 2010) have divided business models into *novelty-centered* and *efficiency-centered,* two popular design themes identified by Miller (1996), as well as to *complementarities-* and *lock-in* -centered by the approach the business model has on value creation – together forming

four dominant business model value creation drivers. Novelty-centered business models deal with new ways of conducting exchanges with various exchange partners. This might refer to connecting previously unconnected parties, creating new ways to link transaction partners or designing new transaction mechanisms. Efficiency-centered business model design on the other hand refers to companies who seek value creation through transaction efficiencies through their business models. Efficiency-centered business model pursues to lower the transaction costs on all transaction participants involved. It is ought to be noted that these two orientations are not mutually exclusive – some overlap may even exist: new innovative ways to conduct business may lead to lower transaction costs. These two design themes are especially suitable for examining internationalizing small entrepreneurial firms; innovation and efficiency reflect fundamentally two alternative ways to create value for an entrepreneurial firm. Zott & Amit have noted that entrepreneurial companies can adopt their business model from elsewhere or decide to create a new business model; however imitated business models are often associated with lower costs and transaction economies.

Lock-in designs aspire to retain third parties, for example customers, as business model participants; it prevents the migration of strategic partners and customers to rival companies (Zott & Amit, 2001). This can be created through high switching costs, positive network externalities deriving from the business model structure or through the content and governance of the business model structure (Zott & Amit, 2010). Strategic assets the likes of strong brand and good buyer-seller trust operate also as strengthening elements for lock-in effect. The presence of strong lock-in effect creates an incentive for partner companies to contribute in the form of complementary products and services thanks to the future business potential. Thus, there are important relationships between lock-in, efficiency and complementarities as value creation sources. (Zott & Amit, 2001)

Designs with complementarities stress the bundling of different goods, resources and technologies (Zott & Amit, 2007). Complementarities exist when bundling of activities, products and resources provides more value than offering these separately (Zott & Amit, 2007; 2010). Brandenburger & Nalebuff (1996) emphasize the importance of complementary outputs to customers by acknowledging that if customers value the outputs of one company more when combined with complementary products from other companies the producers of the complementary products function as complementors for the company. Complementarities can be divided into vertical complementarities and horizontal complementarities. Vertical complementarities may encompass, for instance, after-sales service, whereas by horizontal complementarities embodies bundling of complementary products together by partner firms (Zott & Amit, 2001) Complementarities may sometimes lead to increased efficiencies from the customer's perspective. When having access to products and services complementary to the core product, efficiencies may emerge through reduced search costs and improved decision-making. (Zott & Amit, 2001)

3 INTERNATIONAL ENTREPRENEURSHIP

The meaning of the term international entrepreneurship has evolved during the years and still the definition of the term is under evolution (Fillis, 2007) lacking a unifying, clear theoretical and methodological direction (Oviatt & McDougall, 2000). However, international entrepreneurship can be characterized as a process that is concerned about discovering, evaluating and exploiting opportunities that are located in international markets in order to create future goods and services, in addition to achieving competitive advantage (Zahra & George, 2002; Oviatt & McDougall, 2005). As expressed in Chapter 1.4, a suitable definition for the purpose of the focal research is presented by Styles & Seymour (2006). This particular definition emphasizes exchange as a core concept in international entrepreneurship. The key concepts for international entrepreneurship are identified by Styles & Seymour based on popular academic definitions emerging in the literature. These core concepts of international entrepreneurship are: *border-crossing behavior*; *discovery*, *enactment, evaluation* and *exploitation of opportunities*; *creation of value*, and *unique resource combinations*.

International entrepreneurial firms are perceived to be those, typically smaller firms that from inception expand to international markets – unlike incremental internationalizers that spend substantial amount of time in the domestic market before their initial internationalization venture (Dimitratos et al. 2010). In spite of research often focusing on young and small ventures, Oviatt & McDougall (2000) argue that firm size and age are not defining characteristics for internationally entrepreneurial firms; the term "*corporate entrepreneurship*" is usually used to describe the entrepreneurial actions in large, established companies. International entrepreneurial behavior might appear at any level of a company: individual, group or organizational.

Increasingly new ventures are required to rely on international markets from early on when conducting business in order to be competitive. Internationalization can be viewed as a firm-level manifestation of international entrepreneurship (Jones & Coviello, 2005). Firms may rely on unique global resources, networks and cost factors when aiming for internationalization (Callaway, 2004). Traditional international business theories view the internationalization of companies as a long and gradually onward moving process, taking place in later phases of the life cycle of the firm. Internationalization has been traditionally regarded as an activity for well-established companies (Callaway, 2004). Traditionally companies were internationalizing incrementally, starting with activities with low level of risk, commitment and resources. International activities were also generally something for large, multinational enterprises. Nowadays, the internationalization of SMEs and new ventures is expanding and accelerating drastically further contributing to an increase in the number of actors pursuing international markets (Hessels, 2008).

International entrepreneurship is a concept closely related to business model in the modern world where companies' business models partly consist of vital relationships to partners located in foreign countries in the value network of the company. The primary driver for international operations for entrepreneurs is the search for value creation through cross-border resource combinations (Autio, 2005). Entrepreneurial firms' pursuit of competitive advantage leads them to transfer their assets internationally. The search for competitive advantage leads to the dispersion and disintegration of the focal firms' value chain geographically leading the company to resemble a *"global factory"* where the business activities are divided across countries (Sainio et al. 2010; Buckley & Ghauri, 2004).

Internationalization is not an easy task for entrepreneurial companies despite it is required from many companies in the modern business environment. Zahra (2005) identifies three challenges or liabilities a firm

needs to overcome when entering international markets. The first challenge relates to newness and inexperience of the company, limiting its access to resources and existing networks. The young age of the company may question the credibility and potential viability of the company in the eyes of its stakeholders. The second challenge is related to the small size of the venture. Internationalization often requires slack resources, which often are scarce in the case small entrepreneurial companies (Zahra, 2005). Traditionally internationalization has been viewed as difficult for entrepreneurial firms due to the liability of foreignness (Butler, 2010). When expanding to foreign markets companies need to work hard to overcome barriers of entry, establish links to their customers and suppliers, and achieve the acceptance of potential customers (Zahra, 2005). However being part of a an effective network and prior knowledge can accelerate the international entrepreneurship process. Lack of knowledge of doing business in foreign markets is traditionally viewed as a cause for the liability of foreignness, which lead high learning costs and the discomfort of uncertainty. However, in the modern environment many entrepreneurs have high levels of operational knowledge about international markets due to past experiences or a positioning themselves in a relevant network (Butler et al. 2010).

In this chapter the phenomenon of international entrepreneurship is under profound investigation. The chapter starts with a look into internationally entrepreneurial firms and their characteristics. To understand international entrepreneurship as a phenomenon the drivers behind it are required to understand – these are discussed in Chapter 3.2. Chapter 3.3. focuses on the value network concept, which has gained recently foothold from the more traditional value chain view. Chapter 3.4. concludes the theoretical study of the thesis and prepares the study for the empirical research starting in Chapter 4.

3.1 International entrepreneurial firm

Entrepreneurial firm can be defined as a relatively young organization that possesses the potential to achieve remarkable size and profitability in the later phases of its existence. Such firms face coordination problems in the novel and ever changing environment (Zott & Amit, 2007; Langlois, 2005) thus their performance is often crucially connected to boundary-spanning organizational arrangements (Zott & Amit, 2007; Hite & Hesterly, 2001). One of the core design assignments of entrepreneurial firms is to specify the ways in how they transact and exchange value with upstream and downstream partners and the customers (Zott & Amit, 2007). Sainio et al. (2011) argue that from the viewpoint of the international entrepreneurial firm it is crucial to determine the core resources and capabilities that make the transactions possible with the partners, both up- and downstream. Central is also to define the incentives for transactions from the perspective of partners, buyers and sellers making the focal firm an attractive partner.

The ability to internationalize rapidly after founding a company and succeed in international markets is a function of the resources and capabilities within the firm (Knight & Cavusgil, 2004), however, in the modern world entrepreneurial firms cannot be innovative enough only by recombining the resources controlled by them, they need to exploit also the resources controlled by their suppliers, sales and other partners and customers contributing to the business model. In highly interconnected world entrepreneurial firms need to reach out from the firm itself and industry boundaries to search, discover and exploit opportunities to be able to create and capture value. Innovative, boundary-spanning organizational designs and business models are in the core of wealth creation here. (Zott & Amit, 2007)

3.1.1 International new ventures (Born globals)

Major share of international entrepreneurship research has focused discussing companies seeking internationalization soon after their establishment. These companies are often labeled as *international new ventures (INV)*, a term by Oviatt & McDougall (1994), or as *born globals* (Knight & Cavusgil, 1996); two terms that are used in academic literature somewhat interchangeably. International new ventures are defined by Oviatt & McDougall (1994) as a *"business organization that, from inceptions, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries"*. Knight & Cavusgil (2004) define born globals as *"business organizations that, from or near their founding, seek superior international business performance from the application of knowledge-based resources to the sale of outputs in multiple countries"*. From now on these companies are referred to as international new ventures or INVs.

Oviatt & McDougall (1994) identifies four types of international new ventures based on the (1) amount of value chain activities coordinated across countries and the (2) number of countries involved. (1) *Export/Import start-ups* are age-old type of firms moving goods to where they are demanded while focusing only on few target countries with which the entrepreneur is usually familiar. (2) *Multinational traders* serve a variety of countries and are constantly searching for opportunities to be exploited where their networks are set up or where they can be rapidly established. (3) *Geographically focused start-ups* capitalize on catering the specialized needs of a certain region by exploiting foreign resources. These companies differentiate from multinational traders by having geographically limited presence and having a larger array of value chain activities coordinated across country borders. (4) *Global start-ups* derive substantial competitive advantage from extensive coordination of value chain activities while not being geographically limited. Global start-ups

exploit international opportunities proactively to acquire resources and sell their outputs in locations of greatest value.

Characteristic for INVs is that their origins are international; this is manifested in the global focus of the management and the commitment of resources to international activities. They are companies that have a global view of their markets and develop the capabilities needed for internationalization and achieving the international goals early on (Knight & Cavusgil, 2004). Implicit in the international entrepreneurship literature is the viewpoint that INVs are associated with higher levels of risk attitude, proactiveness and innovativeness compared to firms that internationalize more incrementally (Dimitratos et al. 2010). In spite of the scarce financial, human and tangible resources, INVs leverage knowledge, innovativeness and capabilities to gain significant success in foreign markets in early stages of their evolution (Knight & Cavusgil, 2004). International new ventures overcome constraints connected to limited history and the small size of the company forcing to commit significant resources to the internationalization process. Seeking internationalization rapidly after establishment enables these firms to capitalize on improved performance to gain greater breadth, depth and speed of technological learning in addition to exploiting competitive advantage (Fernhaber et al. 2008).

A characterizing feature for these firms are the international origins of resources, such as material, people, financing and time that are located in multiple countries. Another distinguishing feature for INVs is the age of the firms at the time of internationalization rather than the size of these companies. INVs start the internationalization process with proactive international strategy, whereas more traditional approach to internationalization encompasses a firm gradually evolving from a small domestic company to a larger multinational enterprise. Ownership of foreign assets is not required from INVs, thus foreign direct investments are not needed from these firms. INVs can acquire the needed resources

and assets through strategic alliances and partnerships. (Oviatt & McDougall, 1994)

INVs often being companies found in the high-technology industries, they often face high R & D costs usually realizing before any sales are made forcing the company to internationalize quickly to achieve substantial sales. Competition is usually very intense; the products may become irrelevant in a short period of time, therefore the company may need to internationalize and enter numerous markets quickly in order to take full advantage of the product. (Äijö et al. 2005)

3.1.2 International/Global smaller firms

Global smaller firm is a concept that has recently emerged in the international entrepreneurship literature. These firms differ from INVs conceptually: the global smaller firm is concerned on the energetic market presence, whereas INVs emphasize the speed of entrance to foreign markets. Global smaller firms are companies that have actively pursued market presence in the lead markets of their industries. They identify and exploit opportunities in lead markets more aggressively than INVs or other firms, which are not pursuing presence in lead countries (Dimitratos et al. 2010)

3.2 Factors driving international entrepreneurship

Large number of today's entrepreneurial firms considers their operating domains as international. Numerous changes in the operating environment have contributed to firms having an urge to internationalize often soon their establishment (Oviatt & McDougall, 2000). Traditionally motivation for international expansion has been viewed to derive from firm-specific ownership advantages, which can be augmented to foreign markets

through transactions costs specific to the firm (Callaway, 2004; Dunning, 1988). However, the emergence of networks, alliances, public goods and industry-wide standards have proved to be helpful for many entrepreneurial firms, thus large number of the advantages are not anymore firm-specific these days (Callaway, 2004; Dunning, 1995).

International expansion often is simply an outcome from demand that spans international borders (Oviatt & McDougall, 1995). Internationalization in the early phases of a company enables the firm to take advantage of narrow opportunity windows and exploit products in international markets before rival companies are able to establish their presence in the markets. International expansion contributes positively in realizing performance advantages through increased profitability (Fernhaber et al. 2008). The technological advancements in communications technology and transportation serve as important examples, which have created opportunities for the smaller companies to expand their operations across the borders. The reliefs made in governments' protective policies have decreased the amount of protected markets and led to new markets to be exploited (McDougall & Oviatt, 2000).

Callaway (2004) notes that external resources to the company, available to other companies as well, influence the internationalization of firms. This reveals that not all companies possess the features of born globals and that are expanding to international markets; these internationalizing firms must possess some firm-specific features them to be able to identify and exploit emerging international opportunities.

Incentives for international expansion may derive from specific cost factors, obtaining and possessing certain unique global resources and having a global network while company's strategies and capabilities moderate and strengthen this relationship; Callaway (2004) notes that internationalizing companies need to employ strategies and evolve

organizational capabilities in order to be able to diffuse knowledge for exploiting, enhancing and developing external resources. Here the company's capabilities and strategies serve as moderators enhancing the relationship of external relationships between external resources.

A number of firms feel the urge to expand internationally to be able to benefit economies of scale existing in the industry. Economies of scale are especially notable in high-technology industries such as software where the entrepreneurial firm is often highly niche-focused and the companies face substantial R & D, start-up, finance, marketing and distribution costs (Callaway 2004; Jolly et al. 1992; Hordes et al. 1995). Firms must search for markets outside the domestic country to be profitable and recover the costs invested in new technologies (Qian & Li, 2003) – this is the case often with small domestic markets and when the product has only a limited lice cycle (Bower & Christensen, 1995).

The high costs before earning any profits and the limited resources of small entrepreneurial firms often requires inter-firm collaboration (Callaway, 2004) and to find suitable partners often demands establishing relationships with foreign companies. Zahra et al. (2000) argue that companies that are able to maximize technological learning and are exposed to learning opportunities emerging from various foreign environments are the ones most likely to start sales activities in international markets. Companies that are able to tap into global knowledge, incorporate it into the organization and accumulate it are most probable to expand internationally; these firms are most potential to be exposed to ways to improve efficiency and gain advantage from economies of scale and are able to obtain these into their own activities (Callaway, 2004).

3.3 Value network

Traditionally value has been viewed to create in the value chains of companies. This value chain view, rooted in traditional production line model, however is becoming substituted by new enterprise model of value networks (Allee, 2000). At conceptual level value network can be evaluated as business models that are linked to other business models and customers. The purpose of the value network is to create value for customers and the companies involved in the value network. Value networks are characterized as customer-oriented and collaborative. The underlying force forming value networks is the needs and choices of customers (Pynnönen, 2008).

The importance of networks in business has increased significantly during the last decades (Westerlund, 2009). Strategic interorganizational partner networks have become one of the key resources for companies and their business models; the networks and their management have proven to be one of the central survival factors in the global markets for entrepreneurial firms especially in knowledge-intensive sectors (Westerlund, 2009). Today large share of companies' key resources may lie outside their direct control (Hamel, 2002). Companies form strategic alliances with partner firms in order to gain access to the resources owned by the partners (Pynnönen, 2008).

The interorganizational relationships are a core element in internationalization (Welch & Welch, 2004) and a significant source of competitive advantage in international entrepreneurship (Sainio et al. 2011). However the management of these relationships has proven to be a central challenge for entrepreneurs – the identification of where and how value is being created are core issues for managers to evaluate (Sainio et al. 2011). Foreign market access functions as a key component to foreign market penetrations and source of knowledge about the markets. The internationalization process is essentially dependent on the development

of relationships with the right sales partners, key customers and other intermediaries. The strengthening of these relationships often leads the entrepreneurial companies to increase information flows between partner companies and build trust and mutual understanding that help to reduce psychic distance between countries. The existing domestic and foreign relationships are often exploited when entering new foreign markets in the form of utilizing the existing connections of current customers, suppliers and sales partners that have already internationalized (Welch & Welch, 2004).

Gaining access to already existing networks can help and speed up remarkably a firm's internationalization process (Zahra, 2005). The benefits of using and acquiring a partner network are significant for internationalizing entrepreneurial firm. The firm can capitalize from tapping to partners' market knowledge, attain access to new markets out of reach without local partners and grow the business (Sainio et al. 2010).

Forming strategic relationships within the value network may be of significant benefit for a firm to thrive in foreign markets. Gulati et al. (2000) have discussed the strategic networks of companies and have defined them as *"stable interorganizational ties, which are strategically important to participating firms. They may take the form of strategic alliances, joint ventures, long-term buyer-supplier partnerships, and other ties"*. The strategic partner network contains several sources of value for companies; Strategic networks enable companies' access to information, markets and technologies in addition to the potential of sharing risk, and generating economies of scale and scope. Additional sources of value may encompass shortened time to market, increased transaction efficiency, reduced information asymmetries and improved coordination between firms in case of an alliance (Zott & Amit, 2001).

Often the role of intellectual value exchange and knowledge is forgotten as and important part of the foundation when discussing the networked

enterprises. The value exchange in the networked enterprises consists of three “currencies” of values: (1) Products, services and revenue (2) Knowledge (3) Intangible benefits (Allee, 2000).

3.4 Value creation through business model in international entrepreneurship

Value creation is a theme closely related to international entrepreneurship; Zahra (2005) argues entrepreneurial firms are defined by their actions, which are in the heart of new ventures’ ability to develop means to create value above their competitors’ abilities – not by the resources they own and control. This view is based on Oviatt & McDougall’s (1994) insight that new ventures are not required to own their resources in order to internationalize their operations.

Autio (2005) expresses that the main factor driving internationalization is value creation through cross-border resource combinations. Internationalization is a strategic issue and essential for software companies to be able to provide value for the company itself and its shareholders (Heikkonen & Mäkelä, 2004). Entrepreneurs exchange and co-create value in the entrepreneurial process with several actors and stakeholders such as customers, partners, employees, financials and society. To thoroughly understand the behavior of the entrepreneurial company and the entrepreneurial environment one must understand the types of exchanges, their meaning and media. (Styles & Seymour, 2006)

As aforementioned, value is created together with partners in upstream and downstream of the focal firm. Management of value creation is determined by the nature of these partnerships. Ties and dependency exist between the firm and its partners; the stronger the connection between the companies, the more strategic vulnerability the focal firm has to deal with. The trend of firms concentrating on their core competencies

has lead to externalization of other value activities to their partner network while creating upstream partnerships possessing greater ties and dependency. (Sainio et al. 2010)

Likewise in international entrepreneurship, the concept of value creation is just as central in the domain of business models. Business model's overall objective is to exploit a business opportunity by creating value to all parties involved, which means satisfying customer needs and creating surplus while creating profit for the company and to its partners – this objective is reflected in the company's value proposition (Zott & Amit, 2010). This is where business models form a link with international entrepreneurship (Sainio et al. 2010); business model is the core component, which allows companies to search for and exploit business opportunities across country borders. Business model can be viewed as a contingency factor that tries to capture the structure of a company's cross-border actions and influence the performance of the firm (Zott & Amit, 2008).

Interorganizational networks are the highest priority in searching for competitive advantage in international entrepreneurship. A challenge for managers in these entrepreneurial companies is how to manage these networks (Sainio et al. 2010). Governing these networks is in a high role in the success of a firm's business model (Sainio et al. 2010; Westerlund, 2009). Expansion to international markets most likely requires changes in the actors in the focal firm's value chain and also changes in the roles and relationships they have with the firm. Long-term partnerships demand that all the parties gain value from the relationships, therefore value creation becomes a core element in this process. The resources and capabilities of the firm must change and adapt to new situations when the relationships between the firm and partners change in order to be able to control and govern the value exchange. (Sainio et al. 2010)

In the context of international entrepreneurship value creation is executed by cross-border combination of resources with value – this implies that

firms need to internationalize to be able to create value (Sainio et al. 2010; Autio, 2005). Here the business model construct is a valuable tool to identify where and how companies create value in international entrepreneurship.

Exploitation of international opportunities demands cooperation with partners who are expecting incentives from the focal firm. There has to be a reason why partner companies want to conduct business and interact with the firm – in addition to monetary compensation. Therefore, value creation through business model in international context is a two-way street. It is central to evaluate and analyze the incentives suppliers and partners have to engage in exchange with the firm and the value these upstream and downstream partners possess to the firm. (Sainio et al. 2010) From the partners viewpoint the incentives for value exchange transactions is determined by the willingness and capabilities of the firm to offer sufficient demand for the partner's offering now and in the future – these factors must outcome the capabilities and costs of competing firms. (Krapfel et al. 1991; Sainio et al. 2010)

Figure 4. presents the final and advanced theoretical framework of the study: business model construct in the context of international entrepreneurship. Implemented in the framework are the business model elements introduced in Figure 3: value exchange, resources, the four value creation drivers (novelty, efficiency, complementarities and lock-in) and the business model design elements (content, structure and governance) both introduced by Zott & Amit (2001; 2010). Emphasized in the framework are the value-creating transactions (value exchange) in the three interfaces of the firm: between the focal firm and its upstream and downstream partners, as well as between the firm and its customers. The most critical point in value creation exists in the firm-customer interface even though this interface might be managed through sales partners; the product/service created by the focal firm is still in direct contact with customers. This creates a demand to inspect what is actually offered to

the customer and how it differs from the offerings of rivals (Sainio et al. 2010).

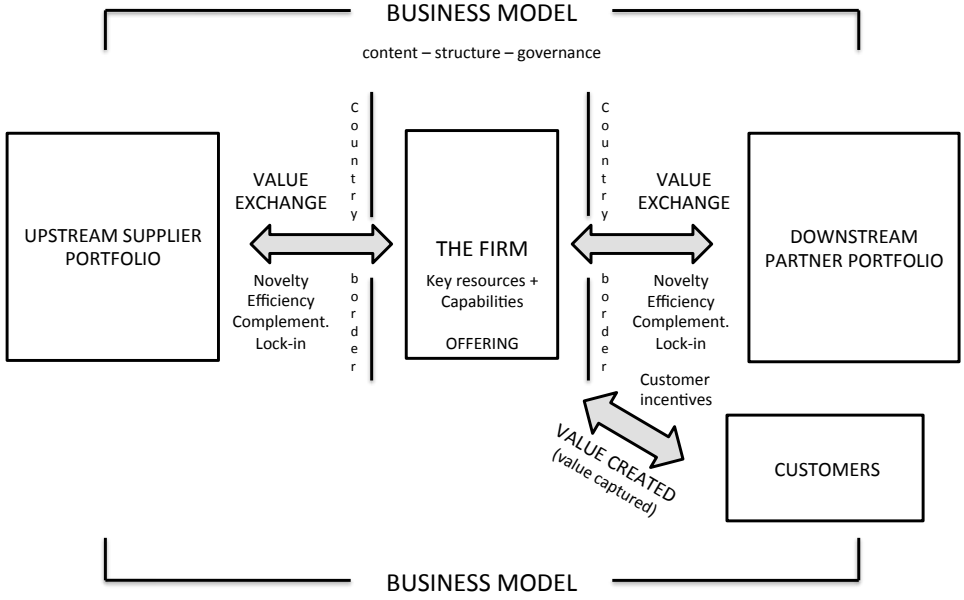

Figure 4. The final theoretical framework of the study

4 RESEARCH DESIGN AND CASE COMPANIES

This chapter discusses the data collection methods, case company selection and design of the study. Chapter 5 presents the empirical research of the study, the cross-case analysis. The cross-case study focuses on the business models of the case companies and examines the international activities of the firms, value-adding partnerships, organizations' resources and capabilities resulting in a presentation of the business models. In Chapter 6 the key findings of the study are presented; the chapter also concludes the study by discussing the findings, sharing the managerial and theoretical implications, assessing the limitations and giving directions for future studies.

4.1 Software industry as a context

The story of software industry leads back to 1960s when IBM decided to unbundle software from its computer production to independent software developers (Rajala, 2009). Since that time software industry has become one of the largest and most innovative industries in the world. It has been one of the fastest growing industries in the global business in the last two decades (Issac, 2004; Äijö et al. 2005). The software industry embodies companies and networks of businesses that are involved in the design, development, maintenance and publication of software solutions to customers and users (Aramand, 2008).

Software industry is fundamentally different from many other industries due to the unique characteristics of software as a product: the product, the software itself, is intangible and an information product diverging from the more traditional industries with tangible elements. The fixed costs from developing software are very high and the immaterial nature of software allows it to be reproduced and distributed through electric channels

practically for free (McConnell, 2001; Rajala et al. 2001) – thus the costs of software are created very early on in the value chain. These development costs are not only fixed but largely sunk; if the product proves to be a failure the resources invested in developing the software are permanently lost (Rajala et al. 2001). In addition to the zero-copy costs, the customization of software products to suit the needs of multiple customers or customer segments can be done often with marginal effort (McConnell, 2001). The industry is generally characterized by innovation-driven market growth, swiftly shrinking product and technology life-cycles, high knowledge and service intensity, intense competition, global market environment and highly dispersed value chains; thus making it a prototypical high-technology industry (Nambisan, 2002; Coviello & Munro, 1997). Software being a knowledge-intensive industry, networking is another feature found largely within the industry. Knowledge-intensive industries depend highly on outsourcing and the use of experts external to the company (Westerlund, 2009; Barkhi et al. 2001). Sallinen (2002) argues that the use of partnerships is common in the software industry particularly when companies are trying to create industry standards.

Software consists from four areas: systems infrastructure, applications development, embedded software and applications solutions (Rajala, 2009). From the viewpoint of customer and end user value creation software solutions can be divided into three categories: software projects, software services and software products. Software projects are partially or fully customized to the requirements of the customer. Software products are standardized systems that require no tailoring to customer needs before the product is delivered for the customer – these are largely aimed for mass-markets, the individual and organizational users. Software services are customer-tailored to a degree before the delivery and are licensed to the organizational or individual customer (Aramand, 2008).

The borderline between service and product sectors have diminished in the industry with more and more firms successfully merging the two

sectors (Hoch et al. 1999). Software is not sold only as stand-alone software products but also as an integral part of various ICT devices and equipment. It is a vital part of high-technology devices and consumer electronics, such as smart phones and music devices. The function of software as the nerve and operating system of ICT and high-technology products together with the zero-copy cost nature of software has contributed to software industry's rise to one of the fastest growing knowledge-intensive industries (Aramand, 2008; Hyvönen, 2003).

4.2 Research method and data collection

The data collection process consists of group interview workshops conducted between August 2009 and May 2010. Key managers of the case companies participated in the workshops providing valuable information about companies' internationalization process and the business models implemented in the companies. In addition to these workshops, insights about business models and international activities were gathered from company material found online, such as company websites, whenever needed to complement the information accumulated from the group interviews. In order to be able to thoroughly analyze business models, additional knowledge about the companies' offering, internationalization process and customers were needed to support the study. These workshops were later transcribed and used as the basis for individual case firm level analysis. These individual case firm analyses were later used to build the cross-case analysis in the core of the study. Due to the nature of the study the real names of the case companies are not used.

The cross-case analysis starts by briefly introducing the case companies selected for the study leading towards a thorough analysis of the companies and their business models. In the core of the analysis are the resources and capabilities of the focal companies, the value-adding

relationships between the focal firms and their partner network. The approach taken in the study also examines the incentives the partner companies experience to establish and maintain relationships with the case companies, thus value exchange is studied from the partners' side as well – a perspective greatly neglected in international entrepreneurship literature.

4.3 Introduction to case companies

Software business is an industry populated by small entrepreneurial companies aiming for international markets often soon after their establishment, thus it serves as a great foundation for value creation analysis from the business model perspective. The case companies comprise of a selection of Finnish small entrepreneurial software companies with boundary-spanning operations, both in supply and sales end of the value chain. Despite the mutual software business domain, the companies' offerings vary greatly from each other by the nature of the product and the target customers. Some of the case companies serve mainly public sector customers while others private sector customers. The basic information concerning the case companies is presented in Table 2.

	Founded	*International activities*	*Workforce*	*Industry field*	*Interview date*	*Interview duration*
Alpha	1996	1999	35	Healthcare ICT	20.08.2009	122 min.
Beta	2002	2006	20	Mobile media content	22.03.2010	90 min.
Gamma	2001	2004	>100	Healthcare ICT	07.04.2010	126 min.
Delta	1997	1998	80	Data erasure	28.04.2010	114 min.
Zeta	2007	2009	10 + 10	Data protection	09.04.2010	90 min.
Kappa	1989	1989	100	Identification solutions	06.04.2010	140 min.
Omicron	2007	2007	4	Mobile learning	14.04.2010	95 min.
Omega	1990	1996	200	Network security	04.05.2010	90 min.

Table 2. Case company information

5. CROSS-CASE ANALYSIS AND FINDINGS

This chapter outlines the findings of the study based on the interviews conducted with the case company managers and complemented with additional material found on the websites of the companies. The section discusses the business models of the case companies in the context of international entrepreneurship. The findings are evaluated and examined through the concepts and themes presented in the theoretical part of the study.

The case study aims to classify the case companies under examination, find the underlying specific characteristics for these classes and examine the possible differences between them from the viewpoint of value creation through business models. The case companies have been divided into four groups for the purposes of the study. This classification of the companies is the backbone of the case study and follows through the whole analysis.

	International activities/sales	Operating years before internationalization	International experience (years)	Share of international sales
Alpha	East-Europe/Baltic countries: i.e. Estonia, Lithuania, Poland, Russia + Italy, Portugal, Turkey, Singapore, Spain, Sweden	3	14	25 %
Beta	US (daughter company), Europe (Greece, Spain, UK)	4	5	70 %
Gamma	Baltic countries (i.e. Estonia), The Benelux, Denmark, France, Japan, Norway, Sweden, UK	3	7	65 %
Delta	Sales subsidiaries (fully owned and partly owned) in Australia, Canada, England, France, Germany, Italy, Japan, Mexico, Spain, Sweden, USA. In 2009 sales in 35 countries.	1	13	90 %
Zeta	Baltic countries, China (distributor), Germany, Netherlands, South-America, United Arab Emirates, UK, USA	2	2	None
Kappa	Sweden and UK (own sales subsidiaries). Argentina, Austria, Canada, China, Czech Republic, Denmark, Estonia, France, Germany, Iceland, India, Luxembourg, Norway, Poland, Portugal, Russia, South Africa, Spain, Taiwan	0	22	50 %
Omicron	South Africa (own sales subsidiary). China, Denmark, Netherlands, Poland, Portugal, Spain, UK	0	4	45 %
Omega	Four main markets: Americas (Brazil, Canada, Mexico, USA), Europe (The Benelux, DACH, France, Italy, Nordic Countries, Spain, UK), Emerging markets (Middle East, North-Africa, Russia), APAC (China, India, Thailand)	6	15	90 %

Table 3. International operations of the case companies

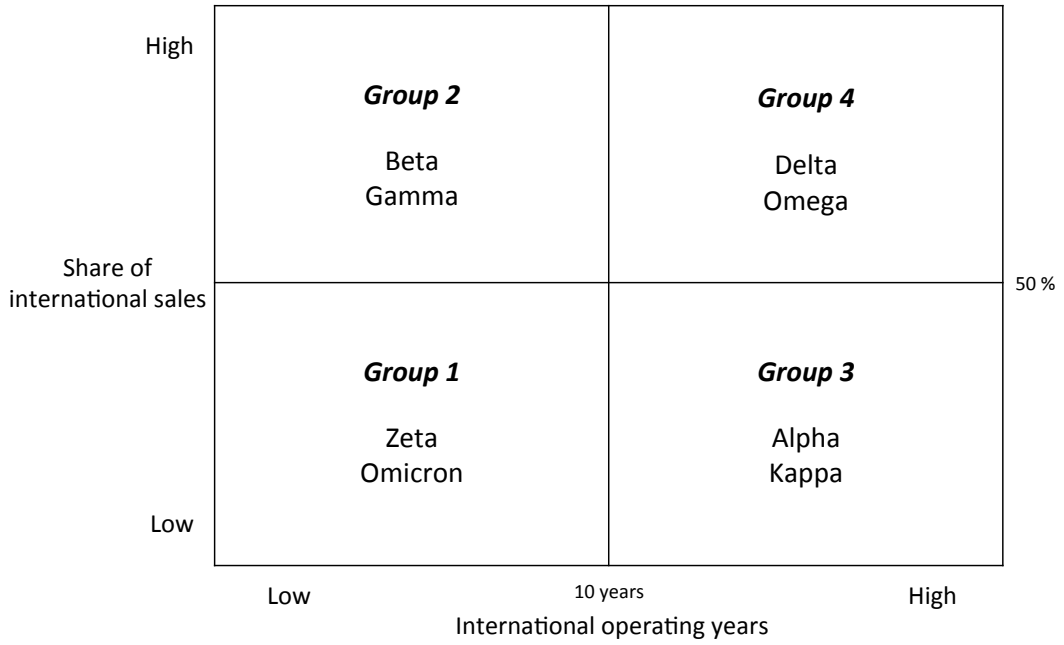

Figure 5. International experience

Table 3. presenting the international operations of the case firms unveils significant differences between the case companies concerning the *international operating years* and the *share of international sales* from the total sales earned. The classification of the companies derived from Table 3. is introduced in the following figure, Figure 5., portraying the degree *international experience* of the companies. The percentage of international sales indicates the relative importance of international markets for the businesses and their success. Naturally, the more business a company conducts in international markets, the more important these markets are for the particular company. International operating years are assumed to have a connection with the amount of knowledge gained from international activities, and skillsets needed in those operations. Having longer experience from international markets, the companies are more likely to possess well-developed partner networks and are accustomed to operate

in these international environments. It is viable to assume the more experience a company has from international environment, the more refined its business model is for the international markets. A valid assumption is that as the international experience increases and companies conduct more and more business in foreign markets, the value creation process faces changes or the companies develop completely new ways to create value together with partners. Development of the value network and gained knowledge within the company about international business may function as drivers for these changes. The changes related to increasing levels of international experience emerging in the business models of the case companies are in the focus of this study.

Figure 5. presented above shows that the companies divide into four groups, each group comprising of two companies, thus making the matrix a suitable framework for the examination of the companies and basis for the cross-case analysis. The case companies are divided into two categories based on the share of international sales from the total sales. 50 % is used as a deviating figure diving the companies in two segments *low* and *high*. Similar classification is done based on the international operating years; ten years of international operating years is used here as a deviating figure for the companies. As a result four international experience groups are formed. Zeta and Omicron occupy the group *low experience*, Delta and Omega *high experience*, whereas companies Alpha, Beta, Gamma and Kappa are in the two *moderate experience* segments. The low international experience companies Zeta and Omicron are also the smallest companied measured by the amount of employees. Omega in the high international experience group on the other hand employees the highest amount of workforce, thus indicating that international experience and company sizes do have a connection together.

5.1 International activities

All case companies have activities across the domestic country borders creating value for the company itself, the partners and the end-customers. Table 3. earlier showed that nearly all companies have a significant share of revenue earned from international markets. Only Delta makes an exception: in the time of the interview it had not yet achieved any revenue from the international projects it had in progress. Notable is also that all of the companies have international activities, whether upstream or downstream, in several foreign countries. The companies have spread their activities into many international locations; thus characterization of the international operations as geographically focused is not befitting.

All of the case companies have been active in exploiting business opportunities emerging in international markets. Only Omega waited more than five years from its inception before starting international activities. Major share of the companies have internationalized either immediately from inception or within three years after founding the business. Some of the companies started internationalization by having international suppliers (inward internationalization; Welch & Luostarinen, 1993) before starting the sales of their products in international markets (outward internationalization; Welch & Luostarinen, 1993). Characteristic for the firms is that companies either had the managerial mindset focused towards internationalization or saw the domestic markets not large enough to support the growth of the company in the future already from the beginning. This international mindset and the restrictions of domestic markets is described well by a manager of Delta:

> *"We were born global… The domestic markets are so helplessly small that we knew since the day one we cannot operate here."*

The small size of the domestic market has required most of the companies to start selling their products in international markets and start actively looking for opportunities to expand their sales activities outside the domestic borders.

The nature of internationalization of the companies has been somewhat proactive rather than reactive; internationalization has been an outcome of active search, identification and exploitation of opportunities rather than just a reaction to changes in the external environment. Nevertheless, two of the companies started the internationalization process with a more reactive approach; Zeta's internationalization started rather reactively when the company went public about its customer solutions by achieving publicity through articles. The gained publicity started to provide international customer contacts shortly after. Omega on the other hand started its international sales by utilizing existing sales channels created by a partner company. The partner also acted as a recommending party, offered market pull and provided complementary solution for Omega's products. However, after the initial stage of internationalization Omega has been proactively seeking international opportunities itself. The approach to internationalization by the case companies is presented in the following Table 4.

Company	*Reactiveness/Proactiveness of Internationalization*
Alpha	Proactive
Beta	Proactive
Gamma	Proactive
Delta	Proactive
Zeta	Reactive
Kappa	Proactive
Omicron	Proactive
Omega	Reactive -> Proactive

Table 4. Type of internationalization

5.2 Upstream partnerships

All the case companies have value-adding partnerships in upstream of the value chain. Differences can be found across the companies in the activities conducted by the partners. Generally, the most significant partnerships encompass software development and software components in addition to hardware manufacturing.

The extensiveness of supplier usage varies across the companies; some have chosen to utilize suppliers more extensively, and the international suppliers may have significant roles performing core activities in the value chain of the companies. Other companies may have just few suppliers in their portfolios conducting only non-core functions. For instance, Omicron has chosen not to use upstream partners extensively, therefore it includes only a few partners in its portfolio providing non-core technology.

The use of partners is rather modest in the *low experience* group (Group 1); both Zeta and Omicron have only few partners in their portfolios and the value created from these partnerships relate to the issues small companies may encounter, such as visibility in Zeta's case creating further business opportunities and strengthening the awareness of the company. The upstream partners are not evaluated to create significant amount of value in the business models, thus these companies possess only few partnerships; the significant value-creating activities are performed in-house. In addition to visibility, Zeta gains access to an ecosystem with millions of users, therefore enabling the creation of future business opportunities. Omicron receives value from the partners in the form of customer specific key technology and technology that removes bottlenecks from the company's production, thus creating efficiencies in Omicron's business.

The partner portfolios of the more established and experienced companies in the moderate experience groups encompass already several companies. These partners provide the case companies with core and

non-core software applications (Group 2 and Group 3) and perform hardware manufacturing in the case of Alpha and Kappa (Group 3). In both groups companies have outsourced some of the key technologies. In Group 3 value is derived from the efficiencies the partners bring into the business and scalability (Beta); scalability indicates the partners are able to support the growth of the focal firm. Gamma gains from these partnerships continuity to its business and it conducts basic R & D functions through its partners. The notable difference between the two moderate experience groups relate to the use of hardware manufacturing: both Alpha and Kappa (Group 3) have hardware elements in their products and the production of these elements have been outsourced to partners.

In both moderate experience groups the value of partners generally relates to the technologically compatible applications and software these firms provide for the case companies. The technologies manufactured by the partners are considered as both core and non-core technologies. Strategic value of upstream partners is a value source emerging in both moderate experience groups. Gamma's (Group 2) partners provide the company with long-term strategic value in addition to technologically compatible software, whereas the partners create value for Alpha (Group 3) in the form of scalability and efficiency, thus indicating from continuing long-term relationships. Kappa (Group 3) seeks continuity to its business from its partners as well to ensure its competitiveness in the future. Kappa has also outsourced some of its basic R & D activities to its partners.

Generally, the importance of partner companies in the business model of high experience companies is surprisingly modest. Even though not having many suppliers, Delta has outsourced the manufacturing one of its most critical product components to a partner company, thus it has become highly dependable on the partner – despite the fact that the company tries to avoid the use of upstream partnerships in general. Omega has outsourced as well the manufacturing of the needed hardware

products to partner companies. Despite the extensive partner portfolio of Omega, the company still creates a lion's share of the value offered to the customer in-house; the company does not view the partners having a significant role in the value creation. Partners support both of the companies, Delta and Omega, also in the form non-core software elements.

Generally, the differences between the four groups in the upstream value creation are rather modest and probably connected more to the nature and the complexity of the product itself; in Omicron's case where the product offered by the company is relatively simple consisting only of software elements the need for suppliers is rather low, whereas the requirement for suppliers in Alpha's case is on another level when the solution sold for the customer is built from several software and hardware elements with tailor-made features and may be implemented into complex organizations.

The value gained by the partners from these relationships often appears to stress the financial aspect of the value exchange – revenue in other words. Revenue is a source of value for partners in all of the four groups. This is hardly a surprise, since the fundamental incentive for any business exchange is the economic value achieved from it. The company managers often stressed revenue as a main source of value in the interviews. Three managers pointed about the partners' incentives:

> *"They (partners) want money. There are no any other particular reasons." (Manager of Delta)*

> *"There are really no other reasons than money… Of course we could come up with some fancy explanations, strategic reasons and such, but in the end it is money that drives everything." (Manager of Omega)*

"… For the suppliers that we've used, obviously they are looking for income… " (Manager from Omicron)

Other value-creating factors for suppliers often arising from the interviews are growth and access to international markets achieved through the case companies. The partners of Beta and Gamma (Group 2) especially seem to value the access to international markets. Thus the companies with only few international operating years have partners in upstream that have low internationalization rate themselves or are only operating in few markets and are seeking growth. The reference value gained by Beta's upstream partners from the partnership supports this hypothesis. Growth potential seems to be of value for the partners in Group 3 as well. Partners of both Alpha and Kappa view the growth opportunities achieved from the partnerships as a driver for value. Growth potential and access to customers/international markets create value also for the partners of the Group 4 companies. Sources of value for the partners of *low experience* companies seem to vary from the other groups. The most critical partner for Zeta value the additional software developed for the ecosystem thus increasing its attractiveness overall. On the other hand the small partners of Omicron seek, in addition to revenue, novelty and experiences from the projects conducted with the company.

The case companies also have roles as reference customers opening new opportunities in the future in new markets for the partners. This is a source of value for partners of Group 4 companies, Delta and Omega with high experience. Naturally, the value created by a firm depends largely on the size and international experience of the upstream partner itself. The reference value of case companies is higher for smaller upstream partners than large multinational companies with yearly turnover worth perhaps even billions. The larger companies in Group 4 with high international experience have already possibly established a highly regarded international brand thus serving as a good reference customer and

possibly the customers and the customer projects conducted by the case companies possess reference additional reference value.

5.3 Downstream partnerships

Similarly to upstream activities, all the case companies have formed significant partnerships in downstream of the value chain. Thus, it appears that one success factor in international markets in the software industry is the utilization of sales partner network that is suitable for the business model and the offering of the company. High share of the firms are selling their products to system integrators or total solution providers who further integrate the products into larger total solutions and sell the solutions to final customers. The use of more traditional sales partners, the likes of distributors and resellers, is more unusual. These types of partners are utilized by Delta, Zeta and Omega. Omega has also partnerships with large system integrators as well in its upstream portfolio.

Companies with low international experience (Group 1) are creating value from the access to the partners' customers and are heavily dependent on the customer contacts created by the partners. In this group the reference value of the partners plays a big role in order to expand further into the international markets. Taking the small size of these companies and their lack of experience of operation in international markets into consideration, the access to customers and reference value gained from the partner companies are logical value-creating elements. A clear difference can be noted between the firms with low international experience and the companies with high experience (Group 4). High experience companies Delta and Omega create value from the large sales volumes the partners can secure and the sales force offered by them. High-quality customer service enabled by the partners is another source of value for Omega.

The two groups with moderate international experience have mildly distinguishing features from each other as well as from the two other groups. Beta and Gamma (Group 2), companies rather new in international markets but with a high share of international sales, value the customer access and the international contacts provided by the sales partners. Alpha and Kappa (Group 3) with lower share of international sales from the total sales also create value from the access to partners' customers, but seem to also value the growth potential provided by the partner companies more than Group 2 firms, which are interested in opening new markets via partners and creating new contacts. Thus, it seems the Group 3 companies are seeking new growth especially from international markets – perhaps more aggressively than Group 2 companies, which lean more towards creating contacts and accessing customers. The reference value as a value-creating element for Kappa supports this as a driver for creating more business and growth. The business domain for Group 2 seem to be more global than for Group 3 companies, which have longer international presence but the same time share of international sales has stayed modest.

Despite the extensive use of downstream partners, major share of the companies are also in direct contact with their customers. Sales partners might be utilized in other markets and direct sales in others, or both methods might be present simultaneously in the same market. This indicates that the business models are often suited to the needs of the market at hand. The direct customer contacts are a viable way of acquiring customer knowledge, map their needs and preferences, and gain information of the markets. A manager from Delta expressed about the use of resellers:

> *"… We could utilize resellers in the future in some markets to create more value. Then their value for us would be the large volumes. Now the value of resellers is negative meaning that we lose the contact for the end customer."… "And data erasure is still*

somewhat consultative even though it is largely regulated by laws. Everyone knows why it is needed to be done, but the sale has to be executed in a way that I will tell you… we will consultatively inform (the customer) how we are going to solve the problem."

Different strategies have been chosen in organizing after sales services and maintenance functions by the firms. Some of the companies have chosen to execute the sales via sales partners and perform the after sales functions themselves directly due to the complexity of the offerings. The service function can be also divided between the focal company and the partner. For instance, Omega utilizes a two-layered model in its service strategy where the partner provides the first line of the services and is supported by Omega's support services.

When examining the value creation in downstream interface from the perspective of the partners, it can be noted that the financial motives, the additional revenue acquired from the business exchange emerges in most of the case companies and transcend all the groups except Group 2. Created revenue from the partnerships seems to be emphasized in the case companies with low (Group 1) and high international experience (Group 4). Revenue emerges as a source of value in all the four companies within these two groups. Another value-creating element for the partner companies appearing in all of the four international experience groups is the technological novelty connected to the products offered by the case companies. Partners of Omicron (Group 1), Beta (Group 2), Alpha (Group 3) and Omega (Group 4) recognize the novel technology incorporated into the products as key source of value. These two value sources, revenue and technological novelty/novel products, emerge as the main sources of value for the partners.

The sources of value for the partners do not limit just to novelty and revenue; companies with moderate experience (Group 2, Group 3) provide

partners with complementary solutions into their offering in both groups. These complementarities appear also in Zeta's (Group 1) business model, thus high experience companies are the only group where complementarities do not exist as a source of value for partner companies. The sales partners of Beta and Gamma (Group 2) value the specialized know-how on the products, customers and their needs. Other sources of value emerging from the data appear to be more company specific; the partners of Omicron (Group 1) and Omega (Group 4) value the flexibility of the companies thus making the business relationships more convenient from the partners' point of view. Beta's (Group 2) partners gain reference value achieved from the partnerships. Gamma (Group 2) provides reliability to its partners' business, Delta (Group 4) exclusivity and high-quality products and Omega high-quality service supporting the partner's service activities.

5.4 Resources and capabilities

Core resources and capabilities are an essential part of a business model and value creation of a business. The individual case company analyses reveal that key resources and capabilities are rather similar across the case companies and the four international experience groups. A justified assumption is that key capabilities and resources are closely related to the type of the product and the business model itself than to the experience gained from international markets. The similarities of the key resources and capabilities between the case companies reflect the nature of the industry and software as a product. The resemblance of the business models across the companies contributes to this notion.

A few core elements can be observed from the companies' key resources and capabilities: technological capabilities connected to the products emerge as the most common source of value for the firms. Almost all of the case companies view technology and technological capabilities of the

company as a crucial element in value creation. As aforementioned, technological capabilities are relevant concerning also value creation in the partner interfaces.

> *"I am guessing they (sales partners) trust our technology, I mean, the technology is a reason why they want to be our partners." – (Manager of Beta)*

Understanding customer needs and having extensive market knowledge emerge as important capabilities for the companies, thus emphasizing that in addition to the technology and the engineering skills it is important also to understand the needs of the customers and potential ones to be able to satisfy them properly and succeed in the competitive environment. This seems to be essential in the case of moderate international experience companies Beta and Gamma (Group 2) with high share of international sales. Understanding the customer needs is recognized as a key capability for Zeta (Group 1) as well. Zeta is the only company that views understanding partners' business as a core capability.

The high-level of expertize and know-how related to the business itself and the industry proves to be another central value-creating resource for the companies. Flexibility or adaptability of the company to suit the customer and market needs is recognized in all but the low experience group at least by one of the two companies as a key capability. Flexibility of the organization appears in both Alpha's and Kappa's business model (Group 3). Organization's flexibility may create value in all interfaces but is most apparent in downstream partner and customer interface. Flexibility is an important competitive advantage for small software firms against large multinational companies with high bureaucracy and hierarchy. Agile companies can adapt to fast-changing customer needs and ensure close relationships and tailored service to customers. The company managers evaluate flexibility of the organizations as an essential capability in

competition against rival software companies. The managers view that competitors are often larger multinational organizations who lack in adaptability and are not agile enough to adjust to fast-changing customer requirements. The case companies as small niche providers are able to supply the customer with just the right solution it needs and adapt to the ambiguous demands by wide scale of customers.

Even though the technology incorporated into the products is highly regarded, quite interestingly the companies do not evaluate the brand of the company or products as a key resource. Only Alpha raises brand as a core resource for the company, thus Alpha's products are always sold under its own brand. One of the managers of Alpha stated:

> *"Brand transparency is remarkably important if any long-term objectives exist in the target country… If we look far, far into the future that some target market starts to rock and we establish a subsidiary there, and if we had some random brand there it would not make any sense. We would have to start from scratch practically."*

Other trends concerning key resources and capabilities identified by the companies are challenging to find, nevertheless the resources and capabilities touch often expertize of the companies, and are somewhat related to the skills and capabilities of the personnel; Omicron (Group 1) views its human resources and the intellectual property rights (IPR) developed in the company as a key resource whereas Gamma (Group 2) places high value on its overall understanding of the business it is in. Alpha (Group 3) on the other hand evaluates its innovativeness and the system and service integration as a source for competitive edge. The company also creates major value from its system and service integration skills. Kappa (Group 3) views its project management skills and the

solution selling for the customers as its main capabilities needed in its business.

5.5 Business model framework

Table 5. presents the business models of the case companies from the value creation viewpoint. The table is divided into four sections according to the grouping presented in Figure 5. The business model descriptions may give an impression that the business models are rather similar to each other. This notion may depict the similar position of these companies in the value network; generally, the firms serve as small niche providers feeding larger partner companies in downstream of the value chain.

5.5.1 Value creation driver

When examining the value creation drivers of the business models the element of novelty stands out rather quickly. Only Kappa's (Group 3) business model does not consider novelty as a driver for value creation. The novelty element connects often to the offering itself and the technology incorporated. Channel novelty appears as another form of novelty in the downstream of value chain in the case of Beta (Group 2), Omicron (Group 1) and Omega (Group 4). Novelty of channel in these cases stands for the cloud services, which have become popular in the last years and have enabled new opportunities for software firms. Noteworthy is that novelty seems not to exist alone, thus it always connects to another value creation driver.

The case companies show that the value creation driver might differ in the different interfaces of business model. For example, in Beta's (Group 2) business model novelty in the form of product channel serves as the value creation driver in the customer interface, whereas in the downstream

partner interface complementarities functions as the main design theme. However, technological novelty appears as the underlying value driver characterizing the business models within all of the companies except Kappa (Group 3).

A great number of the companies' business models include lock-in effect as a design theme. Lock-in effect is always related to the customer interface in the business model. The emergence of lock-in as a common value driver may reflect the type and nature of the offering provided by the case companies. The software offered is usually incorporated into large and complex systems with even hundreds of operating devices creating significant switching costs and requiring vast amount of money, time and resources to be able to master an alternative competing solution.

Zeta and Omicron (Group 1), the companies with the lowest international experience, possess novelty as a value creation driver both in the technology offered by the firm and the channel via which the products are distributed to customers. Both companies offer their products as cloud services, a rather novel distribution channel for software. The partner companies integrate the products of both companies as elements into larger solutions, thus the products are operating as complementary elements in the solutions offered to end-customers. In addition to these, Omicron's business model includes possible lock-in effect in customer interface. Lock-in emerges when the customer solution comprises of customized, customer-specific elements or the customer uses the solution extensively in its business. Differences between the four international experience groups are rather modest. The type of product, its complexity and amount of customer-specific elements may serve as explanative factors for the lock-in effect met in all of the companies' business models, except Beta's (Group 2) – more than the degree of international activities. The degree of customer lock-in however varies across the companies. For example, in Alpha's (Group 3) business the customer faces strong locked-in effect when the company implements its product consisting of complex

software elements together with hardware elements into customer organization. On the other hand, in Omicron's business model the level of lock-in varies depending on the extensiveness of the use of the solution and the amount of customer-tailored elements.

Complementarities are present in the downstream interface in five of the eight case companies. This again represents the role of the small software companies in the value chain as niche providers that supply smaller elements to larger total system providers or system integrators selling large complex systems for end-customers. In some cases the elements provided by the case companies can function as key elements of the system integrators offering creating true competitive advantage. The role of the case companies' products can be also less important and the products can function just as a nice addition to the system integrator's product portfolio. As an example Alpha's (Group 3) product enables a completely new product category for the sales partners, thus it can act as a source of growth for the partner companies.

Efficiency as the fourth value creation driver presented by Zott & Amit (2010) does not appear to play a major role in the business models of the case companies. Only Delta's business model incorporates efficiency as design theme in the downstream partner interface. According to a manager from Delta, the company has decided to keep the sales activities mainly in-house in order to reduce cost and retain their efficiency as high as possible.

As noted by Sainio et al. (2011), the value creation driver can vary in different interfaces of a company's business model and there may be several design themes present simultaneously in the different interfaces of value creation. This notion is not presented in the original study by Zott & Amit (2010) presenting the four design themes or value creation drivers. Nevertheless, novelty as a driver is shared by all of the case companies' business models.

5.5.2 Design elements

When taking the main design elements of the business models under investigation, it is possible to draw a conclusion that the business models are rather similarly configured to one another. Again this reminds of the role of the companies as smaller niche providers feeding their products to larger companies, system integrators and total solution providers. The basis of the competitive advantage for the case companies is the technology created, thus the companies concentrate on developing the technology and other know-how bound activities creating the most value for the business. Other less important and non-core activities are usually outsourced to partner companies. Hardware manufacturing serves as a good example of this operation method; none of the companies having hardware elements in their offering manufactures the hardware themselves but outsources it to partners.

Despite the companies concentrating mostly on the core functions and outsourcing the non-core activities, at least one of the companies in all four groups outsources some of its core activities. In Group 3 and Group 4 both companies outsource some of their core functions, thus indicating that the more international experience companies have, the more likely outsourcing of core activities is – especially if the international experience is based on the operating years in international markets. In Group 3 both companies acquire hardware core to their offering from their partners – Alpha also has outsources the production of core software components to partner companies. In Group 4 Delta acquires a core software component from a key partner and Omega on the other hand outsources one of its core hardware components to a key supplier.

The activities chosen to keep in-house by the companies, the most central to the businesses in software industry, are somewhat invariably research and development, software and product development functions. Supporting activities produced within the company may encompass

customer-consulting, installation, after sales support and maintenance functions. However, these supporting activities may be outsourced to partners depending on the strategy chosen by the companies. Omega (Group 4) has chosen a model where it provides the support and after sales services together with the downstream partner companies.

As aforementioned some of the companies have also decided to have direct sales to the customers in some markets even though sales partner are widely utilized. Only Delta (Group 4) and Beta (Group 2) operate excessively through their own sales subsidiaries instead of sales partners.

Business model element	**Case Zeta**	**Case Omicron**
Design theme/value creation driver	**Technological + channel novelty** with customer lock-in, complementarities present in downstream partner interface	**Novelty in technology and distribution channel**, complementarities in downstream partner interface, possible lock-in effect in customer interface
Design elements: *Content* *Structure* *Governance*	*In-house activities* Core: product/software development Supporting: after sales support *Outsourced activities:* software development (product platforms /product development environments (core), sales, (consulting + support)	*In-house activities* R & D, product development (core) Supporting: service and support *Outsourced activities:* sales, technology programming (+ R & D)
Customer value	Technological advancement (security, technological capabilities + eliminating human errors), cost-savings, easiness of use and installation	Efficiency, cost-savings, scalability, easiness of use (integration + no installations), end-user activity
Value of upstream suppliers	**Visibility**, provide product platforms (core), cost-savings, **access to ecosystem**	Providing technology (customer specific + other), production efficiencies
Value to upstream suppliers	More software for product platform -> more appealing offering -> network effects	Revenue, novelty + experience
Value of downstream partners	**Customer access + reference customers**	**References, customer access**
Value to downstream partners	Revenue/additional sales, complementary components to offering	Flexibility, revenue sharing, novel products, additional revenue
Key resources & capabilities	Technological capabilities, understanding customer needs and partners' business	Human resources, IPR developed

Table 5. Business model framework - Group 1: Low experience

Business model element	**Case Beta**	**Case Gamma**
Design theme/value creation driver	Channel novelty to end-customer combined with complementarities for downstream partners	Technological novelty combined with strong customer lock-in
Design elements: *Content* *Structure* *Governance*	*In-house activities* Core: software development & delivery Supporting: international customer contacts, consulting, sales, after sales support *Outsourced activities*: sales partners (problematic!), technology development, content, aggregation (peripheral)	*In-house activities* Core: R & D, software development, system integration, consulting Supporting: direct sales *Outsourced activities*: software component manufacturing (core), sales partners, support services
Customer value	Reliable service (product), adaptable software (flexibility), potential for cost reduction	Measurable cost-efficiency, easy to adopt, improved quality at the customer interface, improved workflow
Value of upstream suppliers	High-quality applications for non-core functions	Long-term strategic value, providing technologically compatible (core + non-core) software
Value to upstream suppliers	**Access to international markets**, reference customers	**Access to international markets**, access to public sector bidding, components into a more comprehensive system
Value of downstream partners	Access to partners' customers, market access + preparation	International contacts, system-integration know-how, customer access, scalability
Value to downstream partners	Technological novelty, **specialized know-how**, important system element to spearhead customers (complementary), reference value	Complementary solutions, reliability, **know-how**
Key resources & capabilities	Technological capabilities, **customer + industry knowledge**, adaptability/flexibility	**Understanding customer needs**, **customer/market knowledge**, overall sense of the business(model), technological capabilities

Table 5. Business model framework - Group 2: Moderate experience

Business model element	**Case Alpha**	**Case Kappa**
Design theme/value creation driver	System novelty combined with strong customer lock-in	Strong customer lock-in with complementarities in downstream partner interface
Design elements: *Content* *Structure* *Governance*	*In-house activities* Core: R & D, system & service integration Supporting: international customer contacts, consultation, installation after sales support. *Outsourced activities:* **Contract manufacturing** (core), tailored software (core), bulk components (peripheral), consultation, sales	*In-house activities* Core: R & D, product development Support: sales, after sales service, supporting activities *Outsourced activities:* **Hardware** (contract manufacturing: core/non-core), mechanics + software planning, product development (basic research), sales
Customer value	Measurable cost-efficiency, ease of modifications and maintenance, scalability, uniqueness (technological)	Cost savings, quality, flexibility, comprehensive customer service (planning process), advanced technology, wide array of technologies, brand
Value of upstream suppliers	Scalability, efficiency, providing core + non-core technologies	Continuity, providing components and product elements, complementary software planning, R & D (basic research)
Value to upstream suppliers	Long relationships, **growth potential**	**Growth potential**: sales volumes -> revenue,
Value of downstream partners	Market knowledge, growth, customer access	Reference value, access to customers, growth
Value to downstream partners	Product novelty (complementary offering), enabling new products and new customers	Revenue, complementary solution to offering
Key resources & capabilities	Innovativeness + R & D, system & service integration, **flexibility**, brand	Project management + solution selling, **flexibility**, technology

Table 5. Business model framework - Group 3: Moderate experience

Business model element	**Case Delta**	**Case Omega**
Design theme/value creation driver	Technological novelty combined with strong customer lock-in, efficiency element apparent in downstream activities	Novelty in product channel, possible (strong) lock-in effect, complementarities also present in the customer end
Design elements: *Content* *Structure* *Governance*	*In-house activities* Core: R & D, software/product development, sales Supporting: consulting, after sales support *Outsourced activities:* **software development/product development (core/key component)**	*In-house activities* R & D, software/product development, hardware manufacturing, pre-sales consulting Supporting activities: installation, consulting, sales, support and maintenance *Outsourced activities:* **hardware manufacturing (core + non-core),** complementary software components, sales, support and maintenance
Customer value	Versatility (certifications, product platforms), product performance/efficiency (technological capabilities), **customer service + maintenance (localization, consulting)**, product quality	Efficiency + cost savings, expertize, security, customer interaction + flexibility, **quality of customer service**
Value of upstream suppliers	Providing software components (core + supporting)/software development, supporting functions (IT)	Providing hardware (core + non-core), software platforms + components (complementary), business information
Value to upstream suppliers	Growth potential, revenue, **reference customer**	Revenue, market/customer access (sales channel) + market expansion, **reference customers**
Value of downstream partners	**Large volumes**	**Sales force**, customer reach, value added service
Value to downstream partners	Sales (revenue), exclusivity, product quality	Flexibility + high service level, novel technology, revenue
Key resources & capabilities	Technological knowledge related to offering, own sales network, customer references	Technology, expertize, flexibility

Table 5. Business model framework - Group 4: High experience

5.6 Customer value

The value created for customers is the pinnacle of business model; something that business model ultimately is focused towards to. The sources of value for customers are numerous even though some value sources arise frequently. The customer benefits are often related to improved performance and thus efficiencies gained from the use of the products. Customers value the technological novelty and capabilities the products generally offer for them - in other words the superior performance provided by the product. This may often create remarkable cost-savings for the customers' organizations. Technological capabilities in many cases provide easiness of use and installation – benefits that become significant when the installed complex system may comprise of hundreds of operating devices or units. In Zeta's (Group 1) case the technological advancement of the system helps to eliminate the human factor from the data protection process thus leading to improved security and better performance.

Other sources of value appearing in the individual cases are flexibility of the companies, scalability of the offering and adaptability. The customers of Kappa (Group 3) and Omega (Group 4) value the flexibility of the focal companies thus providing convenient operations and interaction with these firms. Flexibility, or more precisely adaptability of the offering creates essential value for Alpha (Group 3) and Beta (Group 2), who create value for customers from the easiness of modifications and suitability of the offering for different customer needs.

Alpha (Group 3) and Omicron (Group 1) create value for their customers by providing a solution that can be scaled from different platforms to others, as in Omicron's case from low-end mobile phones to more expensive smartphones. Alpha's solutions on the other hand scales from small to large organizations and can be adapted accordingly. Product

quality emerges as one of the value creation sources for customers quite expectedly (Gamma, Kappa and Delta).

The customer value creation appears to be closely connected to the specific product features and less related to the decisions made concerning the business model of a particular company. However, an interesting notion is that the *high experience* companies (Group 4) are emphasizing the ability to provide customers with such service and localization that it considered highly valuable for the customers. This may indicate that the long experience from international markets has enabled formulation of wide sales organization internationally and vast enough resources, thus enabling localized and thorough service with skillful and experienced personnel.

6 DISCUSSION AND CONCLUSION

The purpose of this master's thesis was to explore business models and value creation through them in the software industry in the context of international entrepreneurship. The focus of the study was to find similarities and differences between the case companies through classifying them by the degree of international experience. The topic of the thesis serves both academic and managerial interests. The prior literature has not discussed the business model concept in the domain of international entrepreneurship extensively, thus opening an interesting research gap for the purposes of this particular thesis

The introductory chapter of the thesis covered the background and methodological aspects of the study. The first chapter presented also the preliminary framework for the research and introduced software industry as the context for the study. The theory chapters examined the topic of the thesis from the theoretical viewpoint setting the stage for the empirical study starting in Chapter 4 and continuing to the cross-case analysis in Chapter 5. This cross-case study examined, analyzed and compared the eight software companies and their business models while focusing on the value creation aspect.

This final chapter concludes the study by introducing a summary of the central findings of the cross-case analysis. In addition to key findings, theoretical and managerial contribution of the study is discussed. The thesis finishes with evaluation of the limitations of the study along with suggestions for future research in the area of business models in international entrepreneurship.

6.1 Key findings

The business models of the case companies studied in this master's thesis proved to have many parallels. Despite these similarities, differences could be found both on individual and group level in the value creation process. The study aimed to answer to the research problems presented in Chapter 1.1. For revision, the research problems were:

The main research problem:

- *How does business model describe the value creation of an internationalizing software firm?*

The sub-problems:

- *How is value created through business model in the upstream partner interface?*
- *How is value created through business model in the downstream partner interface?*
- *How the degree of international experience affects firm's value creation?*

The research indicated that internationalization processes of companies tend to be mostly proactive in the Finnish software industry. Software firms are actively seeking and exploiting business opportunities across country borders in order to prosper and achieve growth. Somewhat predictably the most significant driver for the internationalization proved to be the small domestic markets, which force the firms to expand their operations in search for revenue and growth. The small domestic markets are, however, already well built-in into the managerial mind-set of the companies; the limitations of the domestic markets are recognized from the inception and internationalization is considered from the day one as obligatory in the software business.

The main research problem of the thesis enquired, "*How does business model describe the value creation of an internationalizing software firm?"* The cross-case analysis revealed that novelty, more specifically technological novelty, functions as the underlying value-creating element within the smaller, internationalizing software companies. This technological novelty is recognized as a source of value by the companies themselves, their customers and partner companies both in upstream and downstream of the value chain.

The study revealed that companies' business models utilize different value creation drivers or design themes as the basis for value creation. Noteworthy is that the value creation driver may change in different interfaces and one consistent driver across all the interfaces is somewhat hard to find. However, novelty in the form of offering and technology appears as the driving design theme in all of the companies and covers the partner and customer interfaces rather extensively.

In the Finnish software industry business models are structured so that the companies keep the most core activities close to the firm and develop the key software most crucial to their business in-house. However, outsourcing of core activities is not definitely unusual; firms may outsource some of the key technologies to their partners and thus become highly dependent on the partners. Outsourcing of hardware manufacturing appears as a standard in the industry among the small firms. Software firms are usually small and hardware manufacturing is not considered as a core capability for these firms heavily built on intangible capabilities and resources.

The first sub-question focused on the supplier side of the value chain and was phrased as "*How is value created through business model in the upstream partner interface?"* When examining the value creation in upstream partner interface the cross-case analysis indicated that partner companies mostly provide software companies with software elements

and often also hardware. Software companies appear to outsource the production of both core and non-core software elements to their supplier partner firms but still keep the most valuable functions inside the company. The production of hardware on the other hand is outsourced to partners – outsourcing the hardware and concentrating on the core capabilities of developing software appears to be somewhat industry standard. The study did not reveal significant differences between the different degrees of international experience in this area. Nevertheless, the value gained by the internationally less-experienced firms, and often very small firms, tend to relate to issues small and inexperienced companies may encounter. The value created in the upstream interface may relate generally more to the nature of the products offered by the companies rather than the degree of international activities and experience.

When investigating the incentives, in addition to monetary compensation, for the suppliers to engage in business activities with the case companies, the research pointed out that the value gained by the upstream partners from these relationships relate usually to the growth potential and customer access the case companies can offer. However, the partners of the companies with low international experience did not consider these factors as sources of value. The upstream partners of the three most internationally experienced groups value the growth potential and customer access provided by the case companies. Interestingly the partners of the low-experienced firms do not view these as sources for value creation. This may be an outcome of the relatively large size of the partners in Zeta's case and the small size of the company itself. On the other hand, the extremely small size of the partners of Omicron and their nature as one-man-shows do not create need for growth and international operations. The companies with high international experience serve as good reference customers for their upstream partners. These companies have already managed to establish well-known international brands and have customer projects with valuable customers.

The second sub-question asked, "*How is value created through business model in the downstream partner interface?"* The most significant differences uncovered by the research regarding the four international experience groups appear to relate to the use of downstream partners. More precisely, to the case companies' value sources regarding the downstream interface. The study indicated that a key success factor in international markets in the software industry is the utilization of sales partner network that is suitable for the business model and the offering of the company. Software companies are in most cases too small to be able to achieve aggressive growth through own sales organization or even establish one extensive enough for international presence. Downstream partners can provide the small, inexperienced companies with market access and customer contacts crucial to small entrepreneurial firms searching for new business opportunities.

The downstream partnerships proved to possess high reference value for the companies with low experience. When attained vast international experience the value of sales partners seem relate more to the sales volume and growth potential provided by the partners in addition to the customer contacts and market access valued also by the less internationally experienced companies. The differences between the two moderate experience group companies also indicated that companies with low share of international sales (Group 2) seek especially growth from the international markets through the partners. Group 3 companies with over ten years of international operations declared the growth the partners can provide as a key value source. Company managers in Group 2 communicated the access to new foreign markets as an essential value source.

Despite the extensive use of sales partners, direct customer contacts are highly valued. Direct contact with the customers support the companies to improve their offering by gaining better understanding of the customer needs and understand their business generally. Customer contacts are

especially important for companies with highly complex customer solutions including major customer-specific elements, thus requiring thorough planning and co-operation with customer.

The research indicated that three sources of value characterize largely the value creation from the downstream partners' point of view: revenue functioning as the main source of value. These financial motives transcend both, up- and downstream, partner interfaces. The other central source of value for sales partners relate often to the technological novelty the case companies' products incorporate in addition to the revenue aspect. This technological novelty often leads to better product performance and as a new cutting-edge solution it may result in increase customer interest, thus further creating more sales. In addition to these two value sources the role of the companies' products in the sales partner's portfolio is often complementary: the products of the small software companies can aggregate more sales and be something that rivals do not have or even function as deal breakers, which are required by the customer in order to be willing to make the purchase.

The third sub-question "*How the degree of international experience affects value creation?"* focused on the influence of experience gained from international operations in the business models. This research unveiled that company size and the experience gained from international markets appear to be linked with the size and significance of upstream partner portfolio. Small companies with only few years of international experience and share of international sales tend to have smaller partner portfolios in upstream activities and these partners do not most likely perform any core activities for the focal firms. However, suppliers' significance in the business model does not seem to hand in hand with international experience level.

When examining the structure of the business model it can be noted that the outsourcing of both non-core and core functions is common in the

industry. The research indicated that companies with more international experience tend to outsource their core activities more likely than the companies with less experience. Despite the outsourcing of some their core functions to partner companies, all the case companies have chosen to keep the R & D, product and software development functions in-house. These are the most crucial most value-creating activities for a software firm.

Interesting notion is that the more international experience a software company possesses the more likely is the outsourcing of (upstream) core activities to international suppliers. Smaller and internationally less experienced companies tend to keep the core value-creating activities in-house whereas the larger and more experienced companies have outsourced some of their core functions to foreign partners.

Customer interface was the third investigated interface for value creation in the study. The sources for customer value appeared to be rather similar across the companies. In addition to the technological novelty and performance of the products, the main value sources touch efficiency related benefits – usually monetary expenses or improved processes and thus simplicity and time-savings. The study revealed that the companies with highest international experience have been able to provide such customer service activities with localized features that the customers find highly valuable.

Resources are a viable part of a company's business model and the success of the business. This present study did not recognize significant differences in the key resources of the companies with varying levels of international experience. The study appointed that software companies generally lean heavily on the technological capabilities incorporated into the products offered by the companies. Two other key resources for entrepreneurial software firms often arising in the study were customer/market knowledge and the expertize/capabilities of the

personnel and the company itself. These value sources could be labeled under the more broad term of human resources as could be many other capabilities emerging in the study. A company, no matter a software company or not, would be arguably nothing without the personnel and intellectual capability; to make the company thrive in international markets competitive advantage creating expertize is required – after all the software incorporated into the products are outcome of intellectual process.

6.2 Theoretical and managerial contribution

As noted earlier in the literature review the discussion of business models in the context of international entrepreneurship is currently still in its early phases. Value creation in international entrepreneurship has still remained as a subject in need of extra research. This thesis contributed into the literature by examining business models from the value creation point of view in the context of small entrepreneurial firms with cross-border activities. The study took a novel approach to business models by examining the construct and value creation through it from the viewpoint of the three interfaces (upstream, downstream and customer), thus providing a holistic view of the value creation process. Business model served as viable theoretical construct for the study regarding value creation in cross-border activities.

The thesis leans on the article written by Sainio et al. (2011) while enlarging the theory examined in the article on software companies by examining the effect of international experience achieved by the companies on their business models. The study placed the concept of international entrepreneurship into the core of the study as the context for the examination of business models.

Contribution to the existing literature was made by applying the four business model value creation drivers (*novelty, efficiency, complementarities* and *lock-in*) introduced by Zott & Amit (2001) into real world cases in the context of software industry. Contribution to academic literature continued by incorporating the business model design elements presented also by Zott & Amit (2010) into business model framework of the study and examined the *content, structure and governance* of the case companies' business models. The business model framework continued on the trails of Sainio et al. (2011) by taking into consideration the incentives for the partner companies and not concentrating solely on the value creation process only on the case companies' point of view.

From a managerial point of view the business model construct offers an alternative perspective for running an internationalizing entrepreneurial firm that is focusing on the value creation process instead of managing disparate international activities and functions (Sainio et al. 2011). Whenever doing business in international or domestic markets companies should not just focus on its own business and the elements that are creating value for them. In order to have viable and fruitful partnerships companies must know the sources of value and understand the incentives for the partner companies as well. These are easily neglected and only focused on just gaining value from these partner relationships without really understanding what are the motives for the partners to conduct business with the company.

6.3 Limitations of the study and directions for future research

The study comprised only of eight software companies, thus having larger sample of companies would contribute to the validity of the findings and verify them. In addition, the formed international experience groups consisted only of two companies each, therefore limiting the reliability and

the possibility to generalize the results. Naturally, conducting similar research in another industry in place of software industry would likely affect the research outcomes.

The companies presented in this thesis are rather small Finland-based companies. It is ought to be remembered that Finland is a small and an open market for software firms producing complex customer solutions, thus companies are often internationally oriented from early on, which may not be the case for companies from large domestic markets. As noted, the case companies are smaller size companies, thus giving its own character for the study. International entrepreneurship is not a phenomenon just for SMEs even though significant share of the literature concentrates on the smaller entrepreneurial firms leaving the large established corporates out.

The data for the study was gathered almost solely through group interviews. Group interviews as a single method for gathering data is somewhat limited. Combining group interviews with other research methods, such as individual interviews, could have provided the research with more valid and specific information about the business models. Furthermore, all the company managers were interviewed once, therefore conducting several sessions with them might have introduced more profound and holistic data about the companies and their international operations. When examining business models and especially the changes emerging in them due to internationalization, a longitudinal research would be of benefit and more appropriate to thoroughly observe the changes occurring in the business models. However, this particular study in nature is a snapshot study focusing on the business models of the case companies in single point in time and space.

As stated already in the literature review before, the business model concept is rather new theme in international entrepreneurship domain. Academic literature has not yet discussed the business model from value creation perspective when examining the entrepreneurial actions in

international markets. Concerning future studies, a longitudinal research with a long time frame would be highly recommended in order to thoroughly study the business models of companies and the developments experienced there in the field of international entrepreneurship. Business model concept functions as an interesting theme for examining the organization of cross-border operations. More profound and comprehensive study with more substantial amount of companies would validate the findings achieved in this study as well as serve as a platform more extensive research.

Although this study vaguely examined the influence of the product type on the business model and the use of partners, there is plenty of room for additional research in this area. The focal research indicated that the complexity of the customer solution and the need for tailoring might influence the use of partner network and the deviation of service functions between the focal firm and partner companies especially in the downstream partner interface. The nature of the product as a significant factor for value creation in business models emerged in the interviews and the cross-case analysis as a theme that should gain more interest and serve as a viable topic for further research.

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APPENDICES

Appendix 1: Case Alpha

Overview

Alpha is a provider of ICT-systems for mainly in mainly public sector. It was established in 1996 and started its international activities in 2004. Alpha is the market leader in its industry and currently employs approximately 35 people. In the domestic market over 80 % of the potential customer organizations are using Alpha's solution.

Upstream partners:

The partner portfolio consists of approximately 15 partners providing both software and hardware. Alpha started its international operations with inward internationalization before downstream operations. The major share of the purchases comes from few key suppliers with high dependency and business value. Alpha is amid the process of reducing the amount of suppliers in order to gain transaction efficiencies and have more negotiating power through higher purchasing quantities. The aim is to concentrate on partners who can support Alpha's growth in future with sufficient supply volume, therefore efficiency appears to be core issue within the upstream partnerships. This development creates higher dependency and stronger ties with fewer supplier partners. The incentive for the partners to engage in exchange with Alpha is the growth of the firm leading to larger sales volumes in the future and the possibility to engage in a long profitable relationship with Alpha. The partner portfolio is divided so that 1/3 of suppliers are from Finland, 1/3 from Europe, 1/3 from the Far East. Alpha gains from these relationships efficiencies in its partner portfolio and the partners will be able to support Alpha's future growth.

Downstream partners:

The downstream activities internationalized later than the upstream activities. Market share over 80 % in home market meant that hardly any growth could be achieved domestically. Sales are generally organized through local partner companies. Partner selection criteria and selection process is very strict to prevent any ill made decisions. Alpha requires the partner firms to be systems integrators that possess substantial knowledge in IT. Partner companies need to be benefit and value focused; a potential partner company focusing on price is dismissed immediately. Important is also the adequate size of the partner firm. Too large companies are usually very inconvenient to operate with due to the complexity of the organization.

Alpha considers it to be very dependable on sales partners: the company gains market knowledge and public sector customer knowledge from its sales partners. Alpha's share of the partners' total solution is usually minor. Setting up an own sales subsidiary in international markets is not seen as a viable option. The company often provides consulting services for the sales partner in the first stages of the business relationship. Once the sales partner has profound knowledge of the product it does the customer consulting itself. Control towards sales partners is on a medium level: the company does not demand specific partnership contracts, however the use of sales reports is important for Alpha.

Incentives for partners for are the complementary addition to product portfolio Alpha's product brings thus leading to competitive advantage and the growth achieved from the new customer segment enabled by offering new product categories. From the sales partners Alpha gains growth, in addition to market knowledge, creating additional revenue and access to customers.

Customer value:

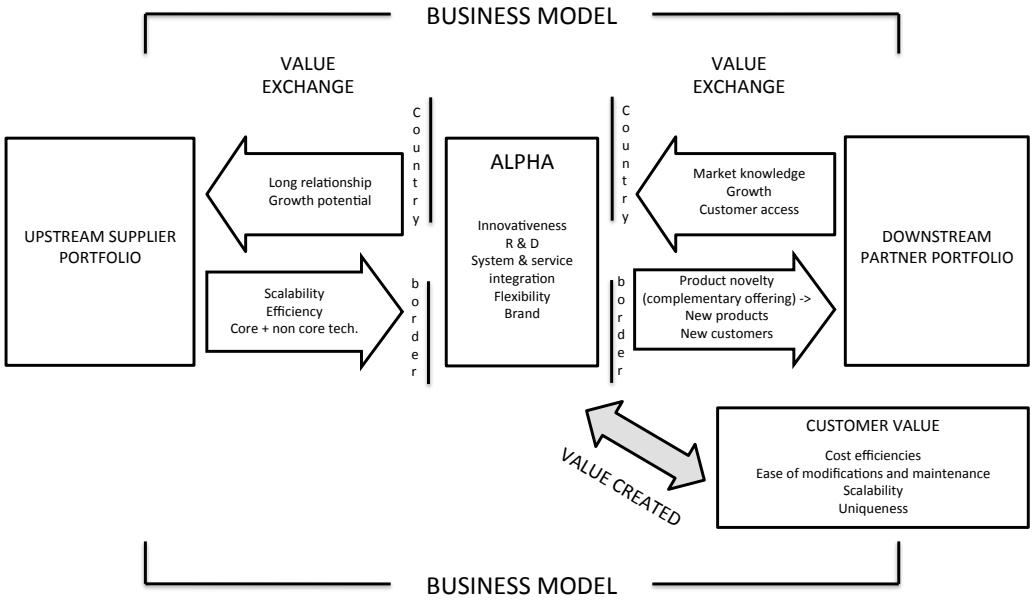
It is important for Alpha to be present and bid very early on when (public) organization is in the process of acquiring new system. Alpha's product is usually a small element integrated into a larger solution provided by the sales partner for the end customer. The value experienced from the product depends largely on who is considered as the customer. The product provides efficiency and security in the customer interface. The technological advancement of the offering is highly regarded. Ease of modifications and maintenance of the system is value-creating element for the customer in addition to cost-savings created by the system. Scalability of the solution is seen valuable. Customer value is derived also from the unique advantages of the product: it is the only IP-based solution in the markets and it can be tailored into the specific needs of the customer. The reliability and experience of the company are also seen as sources of competitive advantage.

Resources and capabilities:

The key resources from the value creation point of view are considered to be innovativeness, R & D, system and service integration, and organizational flexibility. Alpha outsources all of its production. The brand is highly valued and considered as essential within the company: Alpha demands the product to be sold with their name in order to gain brand recognition.

Value creation driver:

Alpha's business model is based on the novelty of the system offered to customers. The business model also possesses rather strong customer lock-in elements: once Alpha has succeeded in installing few solutions into customer organization the lock-in effect starts to become apparent.


BUSINESS MODEL
VALUE EXCHANGE
VALUE EXCHANGE
UPSTREAM SUPPLIER PORTFOLIO
Long relationship
Growth potential
Scalability
Efficiency
Core + non core tech.
country
border
ALPHA
Innovativeness
R & D
System & service integration
Flexibility
Brand
country
border
Market knowledge
Growth
Customer access
Product novelty
(complementary offering) ->
New products
New customers
DOWNSTREAM PARTNER PORTFOLIO
VALUE CREATED
CUSTOMER VALUE
Cost efficiencies
Ease of modifications and maintenance
Scalability
Uniqueness
BUSINESS MODEL

Appendix 2: Case Beta

Overview

Beta was founded in 2002; internationalization started after four years of operation in 2006. The company offers customers solutions, which enable adapting media content into mobile browsers. The company employs currently approximately 20 people. As much as 70 % of the business is created in the international markets – mostly in US markets.

Upstream partners

Beta aims to develop and produce all core technologies in-house. Upstream partners are used to provide non-core software applications to the service. These non-core technologies have been evaluated as technologies that do not create enough value for the core product in order for them to be reasonable to produce in-house. Incentives for partners in upstream derive from the reference value of the end customer as well as gaining access to international markets. Partners' dependency on Beta appears to be on a higher level than vice versa.

Downstream partners

Internationalization process started soon after establishing the business due to small domestic markets. Beta's business model is based in the downstream activities on the use of sales partners; the company does not want to establish its own extensive sales network. It seeks to create value that is native for the partners, something that is in the core of their business and creates the highest value possible. The company views the configuration and building the service as tasks of the partners, therefore the international sales are mainly organized through Finnish system-integrators with global operations, however the sales in the most important market, the US, are executed directly with the customers. Minor share of the sales in Europe also are done directly with customers. Beta has chosen also to utilize partners in countries with own sales subsidiaries.

The company has tested recently a model where market entry is done by using a sales partner, a consultative company that creates the first sales to a customer possessing large reference value for Beta. After the entry Beta decides on further investments in the markets.

Beta's share of large partner companies' sales portfolio is minor in most cases. The advanced technology of Beta's service functions as an incentive for partners to do business with the company. In some cases Beta's service becomes vital from the partner's viewpoint when the customer demands the service as part of the total solution. Also the reference value of Beta and its technology as well as the specialized knowledge Beta has about the products, customers and the customers' needs appear to create value for the sales partners. In return the partners open the market for beta and gains access to the sales partner's customers.

Customer value

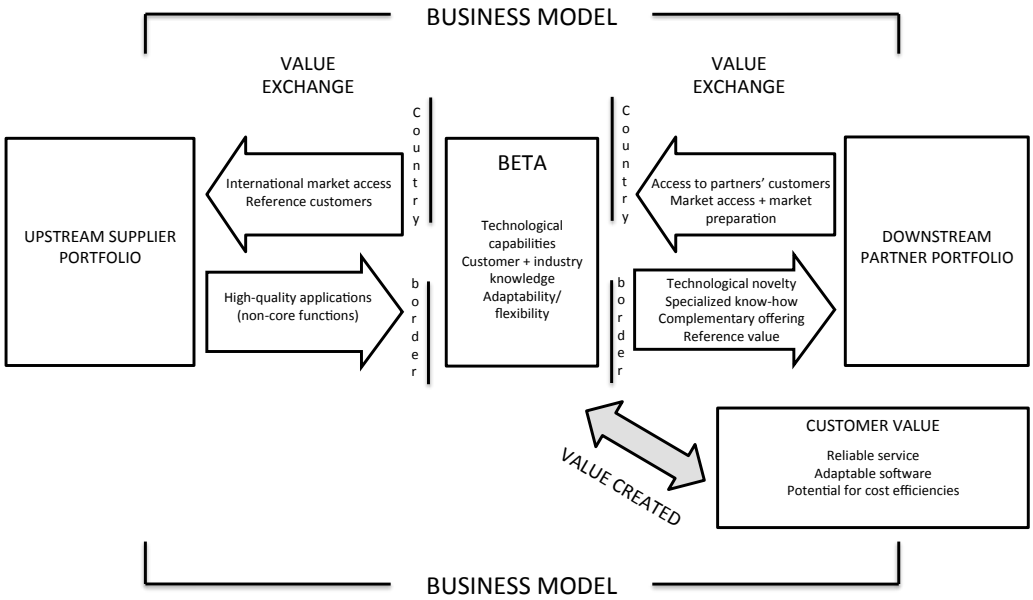
Customer value is driven from the advanced technology, more specifically, from the reliability of the service. Flexibility or adaptability of the service to suit the customer needs and preferences is another feature appealing to customers. Third issue is the cost-efficiencies the service can provide. Beta views that the amount of value customer gets from the service can vary between the segments and depends also on the activity and innovativeness of the customer itself.

Resources and capabilities

Technological capabilities and know-how are the main elements from the value creation point of view. Customer and industry knowledge alongside the flexibility and adaptability of the company and its offering are highlighted as well.

Value creation driver

The business model of Beta incorporates the novelty element in the form of channel through which the service can be offered to the customers. Complementarities element of the business model becomes apparent in the downstream partner –interface – Beta's service is needed as a complementary element to secure the sale.



Appendix 3: Case Gamma

Overview

Gamma is a niche provider of ICT solutions for healthcare organizations primarily in public sector. The company started its activities in 2001 and began its internationalization process in 2004. Roughly 65 % of turnover is gained from international markets and currently the company employs 100+ employees. In Gamma's industry the home market is ahead of development compared to the foreign markets.

Upstream partners

Gamma outsources physical product components as well as software from its partner network. Outsourced software includes both core and non-core components. The company possesses one key technology supplier, which is providing the company with core software components. Notable is that some customers are only accessible through certain partners, which creates a strong dependency on some of the suppliers. The company sees value in consolidating with suppliers and providing customers larger integrated offerings as part of larger solutions – a strategy, which Gamma has already executed and acted as an integrator of the services. Most of the supplier firms providing software act as original equipment manufacturers (OEM) for Gamma, who integrates the software components part of the product portfolio; this way Gamma acts as a channel partner, a sales partner for these firms helping the them to gain access to international markets. Another incentive for suppliers to work with Gamma is that through Gamma the small partner companies become part of larger solution, which is easier to sell in the markets, especially in the public sector bidding it is very difficult to act as a small provider selling a minor niche product. The partner relationships are governed through contracts and project specific contracts but trust between the companies is foremost.

Downstream partners

From inception the company has aimed for international markets. External incentives for downstream internationalization derived from the small domestic market; in order to gain growth the company was required to expand internationally. The company's international activities are more downstream oriented that upstream. The sales in Nordic and Baltic countries are done directly or using partners; in other countries the sales are executed via partners only. Typically the international sales partners are system integrators adding Gamma's service into the larger system or information technology service providers. The company classifies the sales partners mostly as *Value Added Resellers* (VAR); customer support and service functions are carried out by the partner or together with Gamma depending on the capabilities of the partner. Noteworthy in Gamma's situation is that some of its downstream partners act as its upstream partners as well. These VARs provide Gamma with established customer base, market knowledge, system components and value-adding services. Gamma also wishes to utilize the scalability of the partners in the future when the company grows. Cooperation with the sales partners varies greatly: Gamma operates very closely with some of the partners giving the partner access to product development and responsibility for the sales, delivery and service functions.

The value for partners from selling Gamma's products derives from the complementary value of the offering: Gamma provides the sales partner something it does not have in its own offering and cannot respond to the consumer needs without outsourcing the service. Gamma also provides the partners reliability in their business as well as know-how.

Customer value

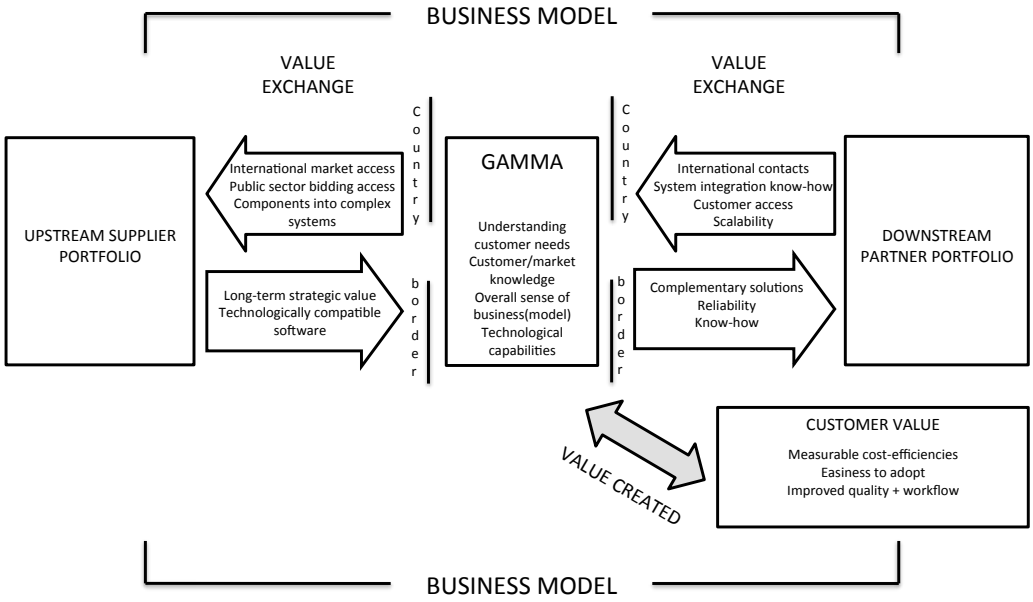
Customer value builds up from the improvement of workflow in the customer interface and providing customers with cost-efficiencies. Customers find the product easy to adopt. Another source of value is the high quality of the product.

Resources and capabilities

Gamma views that succeeding in the business requires good sense of the business model, value creation process and creation of a viable revenue model. The company also values highly their ability to understand the customer needs and development of technology to the needs identified as well as their knowledge about the industry and markets.

Value creation driver

Gamma's service is integrated as a part of the customer's process creating a strong customer lock-in effect. The change from Gamma's service to a rival solution requires significant changes from the customer in its processes. Also, the change from competitors' solutions to Gamma's product demands large changes from the customers' part. Gamma's business model includes in addition a significant complementarities effect since the service is usually integrated into a larger solution.



Appendix 4: Case Delta

Overview

Delta offers data erasure solutions for both public and enterprise sector customers. The company was founded in 1997 and started international operations approximately 1998. Data erasure business started in the year 2000. Currently around 90 % of the sales are earned from international markets. The company employs roughly 80 employees.

Upstream partners

Delta's upstream internationalization has been quite modest due to the policy chosen by the company's management; the use of partners is avoided in upstream activities, however currently the firm has few suppliers providing Delta with software. More specifically, Delta is highly dependable on one supplier providing the firm with a key product component despite the fact that the products are developed basically in-house. The upstream partner relationships are controlled through contracts and organized procedures. The wide selection of potential software providers allows Delta to compete the suppliers and reduces the dependency on a single supplier. The partners supply Delta with both core and non-core software components. The company also acquires software development services and information technology support functions from its partners. The incentives for the partners are the future growth potential of the company and thus increasing sales. Delta also serves as a good reference customer for these firms when exploring new business opportunities.

Downstream partners

Delta saw internationalization as obligatory due to small domestic markets. The company considers itself as a born global firm – roughly 95 % of the turnover is earned from foreign markets. Aggressive downstream internationalization started immediately after the foundation of the

company. It was forced to expand internationally, thus the degree of downstream internationalization is much higher than the degree of upstream activities. After the aggressive start in multiple countries the Delta has reduced the amount of target countries. Downstream operations are solely based on fully owned/partially owned sales subsidiaries that are selling exclusively Delta's products (except in Canada) and are in direct contact with the customer. The company is highly dependent on the area offices and is very involved and committed to their development and training. The company has earlier tried a model where the sales offices are selling products of other companies as well but soon realized that it is not suitable solution for the company's market success. The use of resellers or software distributors has been tried before but has not proven to be a lucrative option. Despite all this, the company is still using distributors and a reseller network in a few countries: a method not seen as an enduring solution.

The newness of the product requires educating the customer – which is where the value is created; third party resellers do not practice this activity without a monetary compensation. Minor effort has also been put to partnerships with IT-service providers: a method not seen as valuable currently but possesses future potential. Incentives for downstream partners to sell Delta's products are the revenue gained from the relationships as well as the exclusivity Delta offers for its sales partners. The partners also place value on the high quality of the company's offering. Value creation for Delta is derived on the other hand from the large sales volumes the partners can enable.

Customer value

Customer value rises from the technological capabilities of the firm that results in product performance, and the vast sales organization offering localized service. The product portfolio is superior to alternative solutions and is the most certificated offering in the market providing a solution for almost every product platform (device) available. The various products

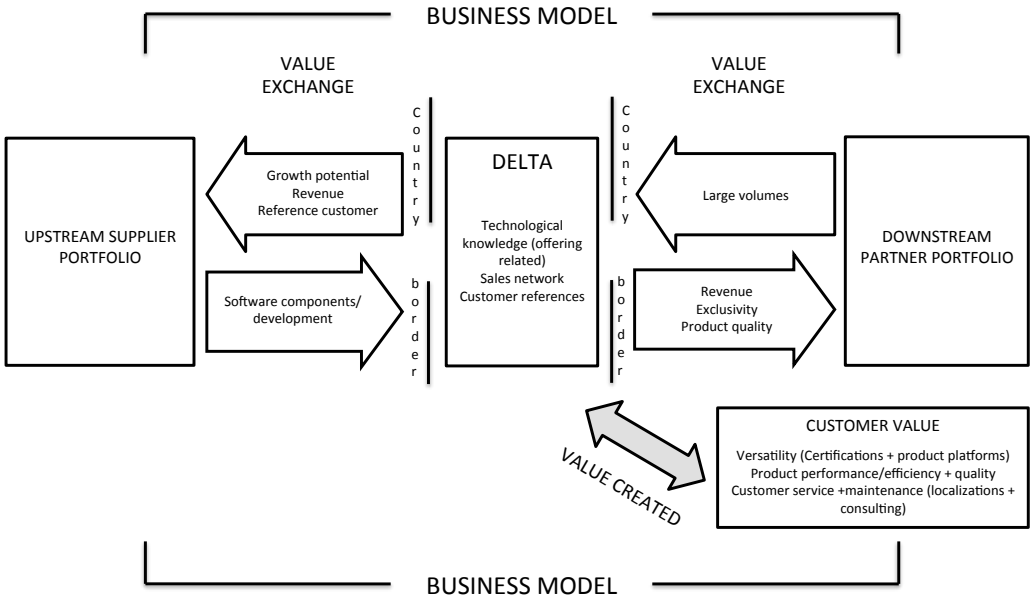
have been tailored to meet the needs of different customer groups all the way from individual persons to large enterprises granting that Delta possesses a suitable product for every customer need. Customer value is also derived from localized after sales service, maintenance and reporting: the company does not offer just a product, but a whole solution/process. Delta's decision to focus only one product category has enabled the company to put all efforts in the focal product category and thus providing high-quality products.

Resources and capabilities

The main resource of the firm is the technological skills related to the product offering; Delta considers the offering as technologically superior to alternative solutions. Substantial customer references are seen also as a valuable asset. Own sales area offices are viewed as a core component in the value creation process; the use of third-party distributors and resellers is not considered as a value-adding element.

Value creation driver

Delta's business model includes the element of novelty in the form of technology. Customer lock-in effect is strongly present due to the need of integration in the customer interface. Delta's aims to offer customer different product variations for different uses thus increasing lock in. The lock-in effect is also strengthened by offering a total solution with centralized governance function including service, reporting and auditing. Efficiency aspect becomes apparent in the decision to keep sales activities mainly in-house in order to reduce costs and retain the sales function as effective as possible.


BUSINESS MODEL
VALUE EXCHANGE
VALUE EXCHANGE
UPSTREAM SUPPLIER PORTFOLIO
Growth potential
Revenue
Reference customer
Software components/ development
country
border
DELTA
Technological knowledge (offering related)
Sales network
Customer references
country
border
Large volumes
Revenue
Exclusivity
Product quality
DOWNSTREAM PARTNER PORTFOLIO
VALUE CREATED
CUSTOMER VALUE
Versatility (Certifications + product platforms)
Product performance/efficiency + quality
Customer service +maintenance (localizations + consulting)
BUSINESS MODEL

Appendix 5: Case Zeta

Overview

Zeta is a niche provider of data protection solutions for high-end expert organizations in both public and private sectors. The company was founded in 2007. It currently employs 9-10 people full time and another 10 employees partially. Zeta's international activities started during the year 2009. Currently the company is not earning yet any turnover from the international markets. The company was born to be international. It saw the domestic markets as small and had larger ambitions.

Upstream partners

The use of international suppliers is rather modest in Zeta's business; however, the suppliers provide the environment for software development, so called software development platforms onto which Zeta creates its software products. Supplier portfolio encompasses only a few companies, two of them having very significant role on Zeta's business. The dependency on the other supplier is very high: Zeta gains from the other partner visibility and access to an ecosystem with millions and millions of users and cost-savings in the form of free software platforms. The product development is solely executed in-house, thus the suppliers do not provide any software development. The incentives for the partners is to create more dependency and demand on their systems by creating partnerships with companies, such as Zeta, which start developing software on these platforms. The new software developed for the ecosystem increases the attractiveness of the ecosystem.

Downstream partners

Zeta saw the small domestic markets as the most significant driver for outward internationalization. Internationalization process started rather reactively when the company gained publicity in industry publications etc. despite the company had proactive plans to internationalize. The company

operates in international markets through local agents and resellers. Zeta is selling the product with the assistance of local agents, in the form of direct sales, in most foreign markets to the end customers with the agent getting a share from the price. Some of the agents devote their time exclusively for Zeta's products. Foreign reseller strategy is used in China; the partner is a system provider that buys licenses from Zeta and resells them to local customers. Agent strategy is employed to gain reference customers for achieving potential partner companies to get interested in Zeta. The company's goal is operate through large system integrators in international markets in the future. Another possibility in the future is to bundle the product with large security companies' products (OEM-strategy) and benefit from the sales channels these larger established companies have. Through the sales partners Zeta gains access to the partners' customers, who may also possess significant reference value for Zeta. The partners achieve from the relationships additional revenue and complementary elements into their offerings sold to customers.

Customer value

Zeta's products are standardized, therefore no tailoring is made for any customer segments or individual customers. Customer value is driven from technological advancement of the products; Zeta's offering is the only solution in the market, that does not use encrypting securing data, thus no passwords are needed and no selections or additional clicks are needed from the user – this reduces the possibility of human errors and contributes to the easiness of use. Other value-creating features are the centralized government and the remote controlling of the service. The product provides the customer also thorough auditing and reporting possibilities not to mention the cost efficiencies gained.

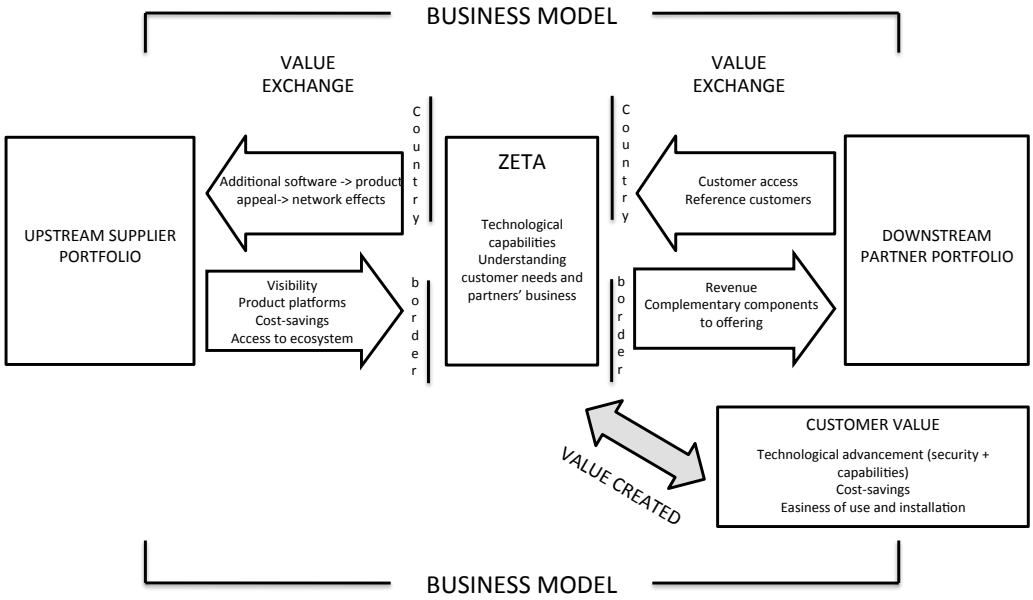
Resources and capabilities

The most valuable resource for Zeta are the technological capabilities of the firm related to the offering. In the downstream partner interface, when co-operating with sales partners, it is important to understand their

business and understand the customer needs.

Value creation driver

Using the service creates lock-in effects for the customer, especially when examining large companies. The products needs to be installed onto all the devices in the company and the un-installing requires time and money. Complementarities element is also present in Zeta's business model in the downstream partner interface, especially in the domestic business; Zeta's product is an additional element creating added value in the security services provided by the large system integrator. Novelty aspect becomes visible in the technology the offering incorporates as well as in the customer interface in the form of channel novelty when used cloud service in distributing the service for the end customer.



Appendix 6: Case Kappa

Overview

Kappa offers identification solutions for businesses. The company was established in 1989. It became international from its inception – inward internationalization started in 1994. Approximately 50 % from turnover is gathered from international markets. 30 % of supplies are from foreign markets. Internationalization was an inevitable process starting from the purchasing of the technology, owned by a foreign company, on which the products were based. Currently Kappa employs some 100 persons.

Upstream partners

The international upstream partner network is very vast: Kappa purchases all of its hardware from outside the company – major share of the supplied components are purchased from international markets. International suppliers were part of Kappa's business model from the inception of the company. The upstream partners mainly consist of hardware suppliers providing Kappa with product components both standard and tailor made, whereas the needed software is usually acquired from the domestic markets. Kappa also buys mechanics and software planning services from suppliers. The company operates closely with local universities, which perform basic research for the business as well as R & D functions. Trust is considered as essential factor in the relationships; contracts are only done with some of the partners. The incentives for suppliers to conduct business with Kappa are the growth potential of the company and naturally the sales acquired from the relationship and therefore the additional revenue. Kappa itself gains from the long-lasting relationships continuity to its business and the partners provide the company with just the products it needs.

Downstream partners

The downstream partner network could also be evaluated as the customer

of Kappa's products. Own sales subsidiaries are only located in Sweden and England but the aim is to establish more in the future. Kappa uses in the downstream activities systems integrators who integrate Kappa's products into larger solutions. The downstream partner network varies from small locals to large multinational companies. Direct contact with the end customer is not considered as a usual operating method. Governance of partner relations is executed mainly through trust. In the partner selection process important is the volume potential of the partner as well as the commitment the partner can provide to Kappa's offering. The dependency on individual sales partner is on relatively high level – only one partner is considered as very important. The main incentives for the sales partner are the revenue acquired from the relationships and the complementary elements Kappa's offering brings to the solution offered by the partner to the end customer. Growth is becoming harder to achieve in the home market, therefore it has to be sought from international markets and through the international partners. Kappa thus gains access to customers through these partners and reference value from the relationships.

Customer value

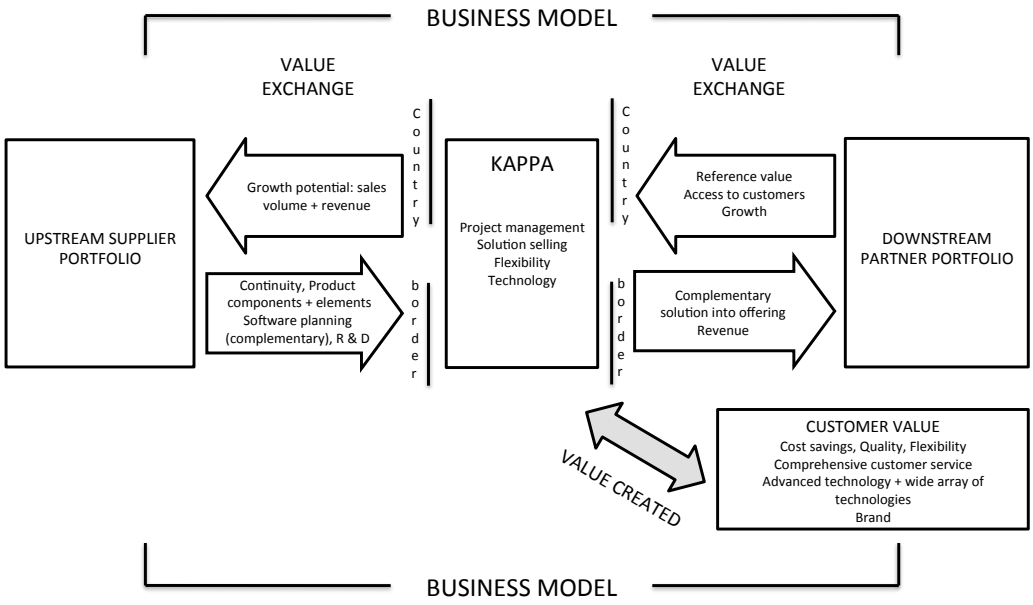
Kappa provides customer both standardized and tailor made high quality solutions. 60 % of products are tailored to customers' needs. Some of the solutions provided to customers are considered as OEM/ODM projects. The customer companies always integrate the system into a larger solution, which is sold to the end customer, thus Kappa is not in contact with the end-user. Customer value is driven from the cost-efficiencies gained, technological advancement of the offering and the total service the company produces for the customer. Flexibility of the company and customer interface/presence (customer orientation) are also elements seen valuable for customers. The company offers also a variety of solutions for different technologies. The Kappa brand is seen valuable from the viewpoint of some partners; using Kappa's brand instead of their own they can capture more business.

Resources and capabilities

The company places high value for the project management skills needed in the OEM solutions and the solution selling capabilities, which enable Kappa to create the right offering for certain customer. The company also values the technology (unique high-quality products) as a main source of customer value. Kappa wants to view itself in addition as flexible with high adaptability.

Value creation driver

Lock-in effect is present strongly in Kappa's business model; the "old technology" provided by the company is rather novel technology wise and Kappa has been the only company in the market offering the technology. Newer technologies offered by Kappa are more standard technologies but Kappa's strategy with this technology has been to offer OEM and ODM solutions for customers with the customer's own brand; this has led to customer's dependency on Kappa and raised the threshold to change provider. Kappa also provides the sales partners complementary components to their offering.



Appendix 7: Case Omicron

Overview

Omicron was founded in 2007 and the international activities started later the same year. The company offers mobile learning services and content for customers. Currently Omicron employs four persons. The company earns approximately 40-50 % of revenue from international markets.

Upstream partners

The company's supplier network is very small and no international upstream suppliers are being currently used. The company only outsources some of its web and mobile programming work from domestic programmers working with specific technologies. The other supplier has a high-value to the company in the form of developing and offering Omicron technology a client is demanding. The incentives for the two partners to do business with Omicron have been mainly monetary but also the opportunity to experience new things has driven the partnerships.

Downstream partners

Right form the start it was clear to Omicron that it needs to internationalize; the small domestic market was not able to provide large enough demand and turnover to justify the existence of the company. Currently the firm owns only one own sales subsidiary located in South-Africa. The downstream partner network consists of mainly of various learning content providers and consultant companies. In the partners' product portfolio Omicron's solution is a smaller, supporting element, which is then sold under the partner's brand, thus these companies are somewhat of systems integrators. However, the service offered by Omicron can become an important part of the partner's offering: it can create the competitive edge for the partner and win the bid.

Omicron appreciates the reference value and the access to partners'

customers it derives out of these partner relationships. The partners see incentives to do business with Omicron in the revenue shares the company gives to its partners from the sales. Omicron's solution can add novelty into partners' offering and thus make the offering more appealing for customers and help keeping the customer relationships going on. The service also supports the partners to create more revenue out of the customer relationships by having products in a new channel. Value is also placed on the flexibility of Omicron as an organization and business partner.

Customer value

The value received from the service depends on who is considered as the customer: the company buying the service or the individual using the service everyday. Efficiency in the form of saved time and more effectively targeted resources leading to cost savings. Valuable feature of the service is its scalability: the service functions from smart phones to low-end phones and it can be used within a web browser or by an individual application. The service is offered as a hosted, server based system, thus it requires no installation in the customer interface. The service can be also integrated as a part into customer's existing systems, therefore installations of new systems are not needed.

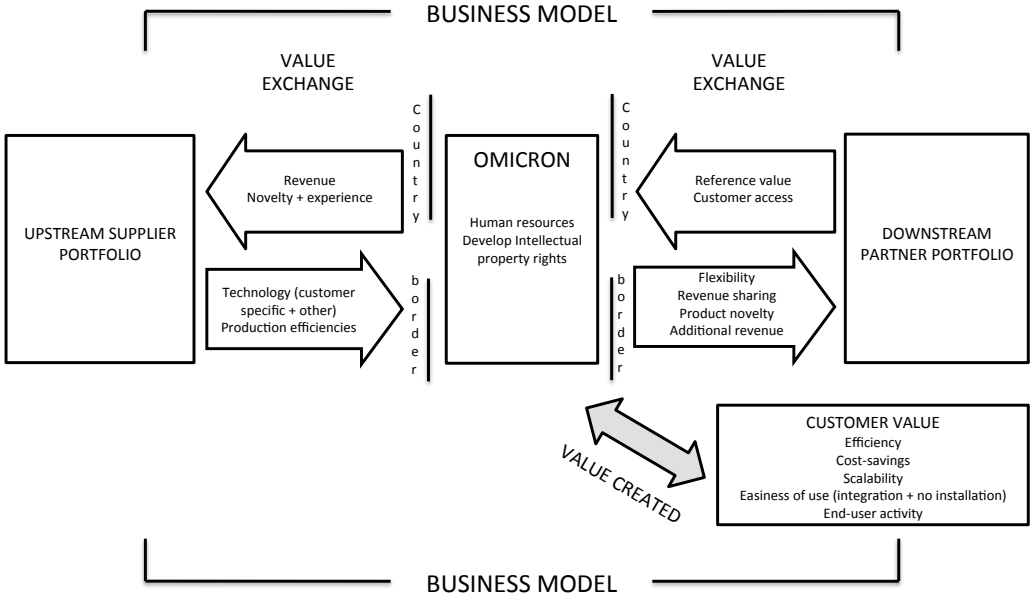
Resources and capabilities

The company puts high value on its human resources and the intellectual property rights (IPR) developed in the company in the last years.

Value creation driver

Technological capabilities and novelty connected to the product. Novelty element is also prominent in distribution channel: the service is provided as a server based cloud service, which is not used by the rivals in the industry. Complementarities present in downstream partner interface; Omicron's service is an element in partner's offering that may even win

some bids even though being just a supporting element in it. Lock-in effect can also be recognized when the solution includes major customer-specific built-in content and if the customer uses the service extensively.



Appendix 8: Case Omega

Overview

Omega is provider of network security solutions. The company was established in 1990 and it started internationalization around 1996. 90 % of the revenue is gained from international markets. Customers of the company are both public and private sector organizations. Currently the company consists of a bit over 200 employees.

Upstream partners

Omega's upstream partner folio consists of more than twenty partners, which all can be considered as global players some of originating from the US, some from Asia and the others somewhere in between. The longest supplier relationships are more than ten years long. All supplied materials (components, software, hardware etc.) are purchased from foreign companies. One of the hardware suppliers provides Omega with core components. Domestic partners are used only to compile the components. Omega develops itself the core software products; only the supporting software elements are outsourced. The company does not see the role of technology supplier as important; the value created for the customer is almost solely created inside the company. The relationships are governed through contracts even though trust is the underlying basis for the relationships.

The gained revenue from conducting business with Omega is considered as the main source of value for partners. Other value-creating elements are the possibility to achieve access to new customers and expand to new markets through the new channel provided by Omega and its vast partner network. Reference customers might be of value for the partners as well.

Downstream partners

Downstream internationalization was an outcome from the small domestic

markets and the desire to grow. Internationalization started with the help of another company providing complementary solution. The partner company built the sales channels in foreign markets and thus supported Omega's internationalization. Internationalization in Omega's case has been proactive. The company is constantly searching for new international business opportunities. The international sales are conducted through own sales subsidiaries and partner companies. Omega focuses on large enterprise customers with wide geographical reach, therefore it needs an extensive partner network; international sales are almost solely conducted through local partner companies and large international partner organizations which can support large customers and provide proper service for them. The downstream partner portfolio consists of over 200 partner companies. The partner companies are by nature systems integrators, service providers, distributers and resellers. The partner companies are used when the product is sold as a service for the customer. The factors examined when evaluating suitable partners are large enough size, their current customers and the services they are selling.

Despite the use of partners, the presence in customer interface and direct contact to the customers is seen as valuable. Omega is closely involved in the sales process by executing pre-sales consulting, piloting and supporting the partner who makes the sales eventually. The sales partners are involved in the sales process in the offer creation to the customer. The partner creates the offer for the customer and handles the delivery of products, value-added services and training the end-user to master the solution. The partner takes care of the support and maintenance of the service during the ownership. The support and maintenance services are also provided by Omega itself; this model can be label as two-layered model where the partner provides the first line of the services and is supported by Omega's support services.

The value Omega is obtaining from the use of sales partners is the

excessive sales force and thus the ability to provide comprehensive service has proven to be the key to success. Flexibility and agility of the company combined with the profound service and the novel technology itself appear to be the incentives for partners to do business with Omega. Also, the competition in the product category appears to be relatively low thus offering a good source of revenue.

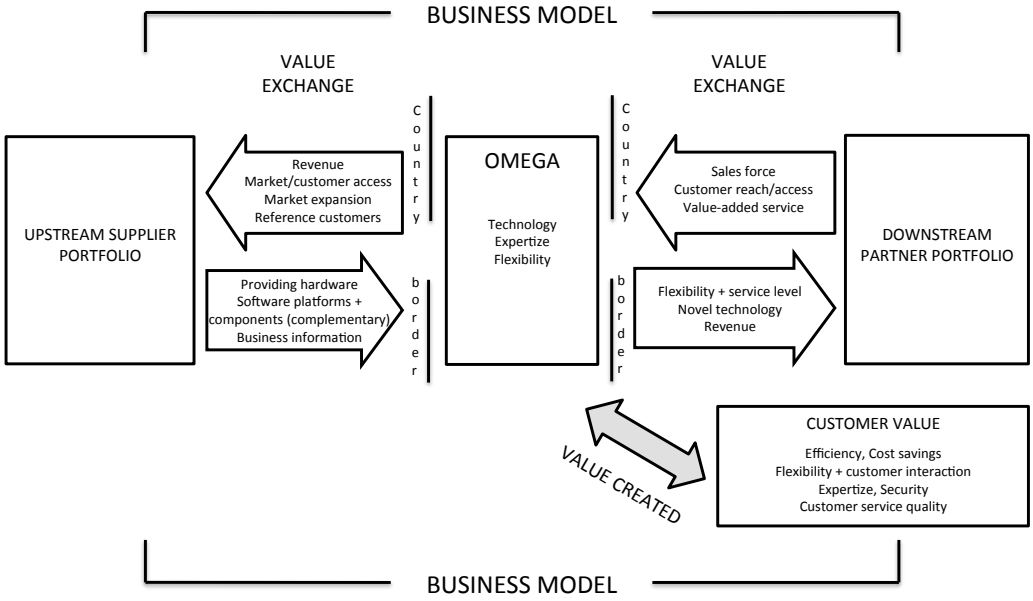
Customer value

Omega's offering is standardized; the products are not tailored to specific customer of industry needs. The offering is provided both as a "product" and a service. The solution creates value for customers in many ways. The main function of the solution is to increase security in customer's business. Efficiency and cost savings are seen as one of the primary sources of value; the centralized management of the solution is seen largely contributing to these. Flexibility of the company and the easiness to interact are seen as valuable for the customers. Expertize of the company also provides best possible customer service and end-result for customers.

Resources and capabilities

Omega views the technology incorporated in the product and expertize of the personnel, especially the support and service, as the main resources and capabilities for the company in the value creation for the end customer. Flexibility of the company is seen as a valuable resource; it is important to adapt to customer needs to retain competitiveness.

Value creation driver

Novelty in the form of channel: the product is offered as a installed service into virtual environment provided by a partner for the customer in conjunction with the traditional approach as a product. Lock-in effect depends on the extensiveness of the integration of the service in the customer's end. If the customer's business comprises from countless units spread geographically, the centralized the governance of the service and

heavy investments may create strong lock-in. Complementarities are present in customer interface. Omega's presence in the sales and service process supporting the downstream partner has proven to create value for the partner and the customer as well.