

MODEL FOR NETWORKED BUSINESS Case study of Application Service Provider's network

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Case study of Application Service Provider's network

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Abstract

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The aim of the research was to create a network business model to optimise benefits for a business network in the area of software industry.

The main research questions were:

- What kind of network business models can be found?
- What are the value creation mechanisms as well as advantages and disadvantages of different models?
- How to use former frameworks to develop a network business model for application service providing business?

The theoretical framework for business networks and their performance was created using multiple research traditions. The traditional economic approaches such as Transaction Cost Economics (TCE) acknowledge the contractual and monetary aspects whereas the approaches based on sociology such as theories on social capital and network governance include the impact of human factors. This foundation helped to form the network business models and the related variables. The created business models differentiate most of all on business logic.

The used research method was constructionist case study. A network business model using dual business logic was applied to the case business network. The empirical material was gathered using five semi-structured theme interviews. The interviewees were in key positions in the three companies involved in the business network in question. The collected material was evaluated in accordance with the theoretical framework in relation to business models, social capital and network development stage.

The case study revealed four required content dimensions in addition to the dimension of time in order for a business network to operate. The network shall provide economical sense for all participants. All network members shall present sufficient business performance. Business model is required to formalise the common understanding of the economical sense and the business performance. Social capital between members enables use of the business model as a tool as well as supports the network to adapt when required. Further attention needs to be given to the processes related to the network development stage.

It is very challenging for a business network to succeed. The case business network was terminated although the developed network business model seemed feasible. The shortcomings in social capital and doubts regarding business performance outweighed the possibilities for economical sense as well as application of the business model.

Keywords: Social capital, network business model, network governance, business networks, application service providing, software as a service

Tiivistelmä

MALLI VERKOSTOITUNEeseen LIKETOIMINTAAN

Tapaustutkimus sovelluspalveluntarjoajan verkostosta

Tutkimuksen tavoitteena oli luoda verkostoliiketoiminnan malli ohjelmistoteollisuuden liiketoimintaverkoston hyödyn optimoimiseksi.

Tämän mallin luomiseksi asetettiin tutkimuskysymykset:

- Millaisia verkostoliiketoiminnan malleja on?
- Miten eri mallit tuottavat arvoa ja mitkä ovat niiden edut ja haitat?
- Miten aiempia viitekehyksiä voidaan käyttää kehitettäessä verkostoliiketoimintamalleja sovelluspalveluntarjontaliiketoimintaan?

Teoreettinen viitekehys liiketoimintaverkostoille ja niiden suorituskyvyille muodostettiin hyödyntäen useita tutkimussuuntauksia. Perinteisen taloustieteen teorat kuten transaktiokustannusteoria (TCE) huomioi perinteiset sopimukselliset ja taloudelliset aspektit, kun taas sosiologiasta ammentavat sosiaalisen pääoman teoria sekä verkostohallinnan teoria tuovat mukaan inhimilliset tekijät. Näiden avulla luotiin verkostoliiketoimintamallit ja niiden muuttujat. Luodut liiketoimintamallit eroavat toisistaan erityisesti käytetyn liiketoimintalogiikan mukaan.

Tutkimusmenetelmänä käytettiin konstruktivistista tapaustutkimusta, jossa kahteen liiketoimintalogiikkaan perustuvaa verkostoliiketoimintamallia sovellettiin tutkimuksen kohteena olevaan liiketoimintaverkostoon. Empiirinen aineisto koottiin viidellä osittain strukturoidulla teemahaastattelulla. Haastateltavat toimivat avainasemissa tapausverkostoon liittyvässä kolmessa yrityksessä. Kerätty materiaali arvioitiin teoreettisen viitekehyksen mukaan suhteessa liiketoimintamalleihin, sosiaaliseen pääomaan sekä verkoston kehittymisasteeseen.

Tapaustutkimuksen kautta kävi ilmi neljä oleellista sisältöulottuvuutta aikaulottuvuuden lisäksi, jotta liiketoimintaverkosto toimisi. Verkoston tulee olla taloudellisesti edullinen kaikille osallistujille ja sen kaikkien jäsenten täytyy osoittaa liiketoiminnallista kyvykkyyttä. Verkostoliiketoimintamallin tehtävänä on jäsentää yhteinen ymmärrys sekä taloudellisesta edullisuudesta että liiketoiminnallisesta kyvykkyydestä. Verkoston jäsenten välinen sosiaalinen pääoma mahdollistaa liiketoimintamallin käytön sekä auttaa verkostoa muutoksissa. Myös verkoston elinkaaren vaiheisiin liittyvät prosessit on huomioitava.

Liiketoimintaverkoston menestyminen on erittäin haastavaa. Tapaustutkimusverkosto purkaantui, vaikka kehitetty verkostoliiketoimintamalli vaikutti soveltuvalta. Puutteet sosiaalisessa pääomassa sekä epäilykset liiketoiminnallisen kyvykkyyden suhteen veivät pohjan taloudelliselta edulta ja liiketoimintamallin soveltamiselta.

Avainsanat: sosiaalinen pääoma, verkostoliiketoimintamalli, verkostohallinta, liiketoimintaverkko, sovelluspalvelu

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1 Introduction

1.1 Background

Models for networking can be used as a guideline or a tool, when considering how to expand business, improve efficiency, customer service as well as profitability. Many times especially in the Small and Medium size enterprises the addressable market is resource limited. The available capital does not allow expanding the product/service offering, the available personnel lacks skills and competencies or simply the time to perform more tasks and also the amount and depth of connections to potential customers and other stake holders may be limited. These are typical situations when firms begin to consider co-operation and networking with other firms and start seeking possibilities for further development (Westerlund 2009, Baum et al. 2000, Hite and Hesterly 2001, Larson 1991, Ahlström-Söderling 2003, Erwee 2001).

This study became relevant as the case study companies began forming co-operation. Intuitively they saw plenty of opportunities and mutual benefits. For the case study companies the purpose of this study was to provide a view of what the co-operation could evolve based on the theoretical knowledge available applied to their specific circumstances. Now, as the co-operation is already over, it is more a retrospective view what it could have been and what actually happened.

1.2 Purpose of the study, goals and objectives

The purpose of this study is to develop a network business model for software business or more precisely for application service providing (ASP) business.

The aim is to answer to questions:

- 1) What kind of network business models can be found?
- 2) What are the value creation mechanisms as well as advantages and disadvantages of different models?
- 3) How to use former frameworks to develop a network business model for ASP business?

From the perspective of value creation mechanisms – the question how the value will be created in business networks should also be answered. In order to answer these questions the definitions for business network and business model are provided.

The study is limited to firm networks – especially to ones that jointly generate some offering to customers. Moreover the study focuses on creating a bilateral co-operation or alliance relationship. Networks that are intended for something else than product/service creation are not considered.

The theoretical framework to firm networks consideration is provided by the more traditional economic approaches of Resource based view (RBV) as well as Transaction Cost Economics (TCE) with a slight extension towards the Supply Chain Management (SCM) considerations. The more recent approaches in the field of economics are the theory of Social Capital, Network governance, Industrial Network Approach and the concepts of Business Models.

1.3 Structure

After the brief introduction and motivation of the study in the first chapter, Chapter 2 introduces the key theoretical concepts highlighting some of the key impacts and expectations to firm networks. In Chapter 3 different models for firm networks are presented and their feasibility are analysed against the theories and hypothesis of their suitability to different situations. In addition the software business is presented. Following that Chapter 4 discusses the methodological considerations, validity and reliability as well as introduces the way the data was gathered and which focal topics were selected for evaluation. Chapter 5 presents the case network over its life span with parallel analysis of the material gathered. Finally, the Chapter 6 concludes the study by summarising key findings, displaying main deviations between the studied praxis and expectations. It also discusses relevant theoretical and managerial contributions with suggestions for future research.

1.4 Definitions

This section provides brief definitions for the main terms used in the study.

Business model

Business model is a representation of a firm's underlying core logic and strategic choices for creating and capturing value within a value network (Shafer et al, 2005).

Business network

Business network is the implementation of a range of social, cultural and technological processes that result in a devolution of power and responsibility and the breaking down of organisational boundaries. This facilitates direct person-to-person connections, sharing of information and joint working (both within and between organisations) in order to pursue common objectives, solve problems and satisfy the expectations of internal and external stakeholders more effectively and rapidly (Hastings quoted by Erwee, 2001).

Social capital

Social capital is the sum of actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit (Nahapiet and Ghoshal, 1998).

Strategic Network

Strategic Network is deliberately created, organised cooperation between companies, with the purpose of achieving a common objective (Westerlund, 2009).

Network governance

Network governance involves a select, persistent, and structured set of autonomous firms (as well as non-profit agencies) engaged in creating products or services based on implicit and open-ended contracts to adapt to environmental contingencies and to coordinate and safeguard exchanges. These contracts are socially-not legally-binding (Jones et al, 1997).

This, however, does not exclude the existence of formal contracts between network members.

Note: In this study the term co-operation is used in a wide sense covering also co-ordination and collaboration.

2 Theoretical background

The theoretical background for this study harvests from variety of research areas. The main categories are the different traditional economic approaches and the approaches based on sociology. Working on those bases a more realistic as well as a comprehensive view of a network firm/firm network is targeted.

Figure 1 presents the transition from the traditional sciences to more detailed approaches of business economics and human behaviour. The theoretical base is purposefully acknowledging on one side the traditional contractual and monetary aspects of traditional economics and on the other the impact of relations and human aspects. Business environment is never only a social or monetary matter, but a complex net of various interactions that have been mainly individually theorised through many approaches.

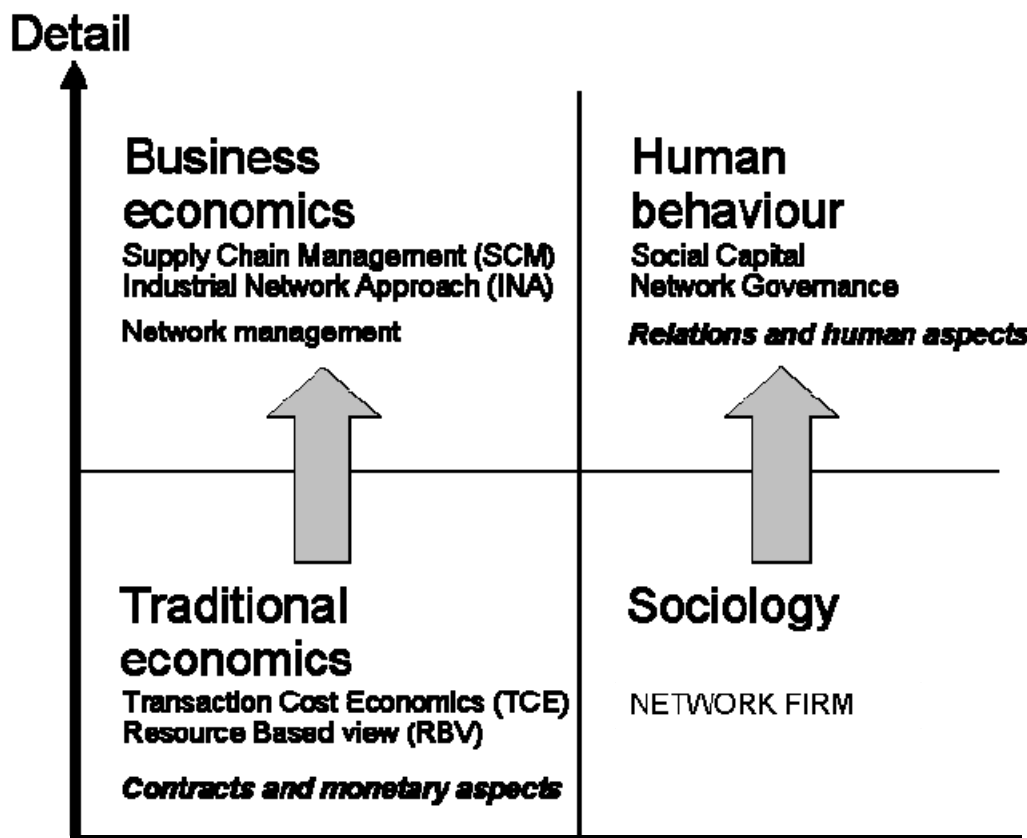


Figure 1: Transition from traditional sciences to more detailed approaches

In the next section the fundamentals of each selected approach are described.

2.1 Different traditional economic approaches

2.1.1 Resource Based View – advantage via skills, competencies and processes

Resource Based View (RBV) focuses on optimising a firm's resource position. It was developed by Wernerfelt (1984) based on the earlier work by Penrose (1959). The purpose was to provide an economic tool to address topics like which resources form the bases for diversification or into what markets should diversification take place. Wernerfelt's approach was to evaluate resources using Porter's five competitive forces analysis.

In RBV a key assumption is that firms can be conceptualised as bundles of resources and that the resources are distributed unevenly across firms. Over time different firms possess, need and have access to different resources.

Resource Based View created the foundation to understanding that firms can create competitive advantage and diversify also based on developing different kinds of resources and competencies. In the 90ies this led to *Core competence* thinking, which was a rather popular strategic management doctrine - especially advocated by Prahalad and Hamel (1990). The leading thought is that firms create highest value and best economic results by focusing on doing what they know best – preferably better than anyone else. The focus on core competencies contributed also to outsourcing and then supply chain management and obviously to the creation of thinking about business networks in terms of specialisation.

The extension of RBV to more dynamic markets is called Dynamic Capability View (DCV). The essence of the DCV is that the source of sustained competitive advantage in rapidly changing and unpredictable situations lies in the dynamic capabilities to integrate, build and reconfigure internal and external competencies or more precisely in the resource configurations that they create (Teese et al 1997; Eisenhardt and Martin 2000). In praxis the dynamic capabilities translate to processes embedded in the firms. Under stable conditions these processes become very structured routines. However, in fast changing environment the processes are more like experimental loose guidelines or frameworks that are continuously adapted.

In a business network setting for slowly changing markets this would indicate vertical integration or stable and firm contract based relationships, where as fast changing, unpredictable markets call for more flexibility and capability for rapid adaptation.

This is inline with the further RBV extension called Relational View. According to it the network competitive advantage derives from the difficult to imitate capabilities embedded in dyadic and network relationships (Yli-Renko et al 2001 referring to Dyer and Singh, 1998). Also the Knowledge- and Learning Based Views give support to it by placing the knowledge and competencies into the centre of sustainable competitive advantage and thus making the firms repositories of them (Yli-Renko et al. 2001 referring to Kogut and Zander 1992). Also Howard Stevenson's (1985) definition of entrepreneurship: "Entrepreneurship is exploitation of resources beyond your own control" comes from the same thinking. This is also very similar to the definition of Social Capital used in this study (see 2.2.2)

2.1.2 Transaction Cost Economics – from 'make or buy' to hybrid contracts and to deeper relationships

Should an activity or even further a product be made inside a firm or would it make more sense (be cheaper) to buy it from the open market, is one of the core questions of Transaction Cost Economics (TCE). Originally when Williamson (1975) developed the TCE theory upon the original work of Coase (1937), it concerned most of all on items that can have immediate monetary value. Later on Williamson has expanded TCE with considerations related to longer term value such as intern/extern competence development.

In the more recent work Williamson (2008) addresses the different firm governance modes using TCE to highlight key attributes and interdependencies for adaptation capability. Theoretically he identifies the lens of contract as the common ground between autonomous (market) adaptation from the economics side and coordinated (administrative) adaptation from the organisation theory side. In this context the key attributes are asset specificity, uncertainty and frequency.

The need to adapt to disturbances on the market - especially on changes in demand - is based on incomplete contract and bilateral dependency due to the asset specificity

such as non-redeployable durable investments in machines or competencies that cannot be immediately replaced by either party. The disturbances are caused by uncertainty i.e. inability to know in advance all the possible circumstances in the future (Williamson, 2008). Frequency i.e. duration and amount of transactions in a specific relation, has an impact on reputation and setup cost. The longer the relationship and the higher the intensity of transactions generally the better the reputation as well as proportionally the lower the setup cost.

In *market mode* as a type of governance i.e. each transaction is a single purchase is optimal when buying fully standardised commodities. Then there is little need for administrative control, the legal-rules contract regime and intense incentives work well. The opposite end of the spectrum is the *hierarchy* i.e. internal transaction. This becomes valid as the last resort when performing transactions would be for instance too complex to arrange. Typical for this mode is high administrative control and low incentive intensity (Williamson, 2008).

The most interesting governance mode from the network business point of view is the *hybrid mode* that is a compromise somewhere between the market and hierarchy modes. Hybrid mode is best suitable when the subject matter is more than just a commodity and when transaction related investments need to be safeguarded i.e. when continuity is important. Worth noting that as hybrid mode contracts are of long term nature this provides lower contractual hazards enabling also lower price.

Table 1: Hybrid contracting styles (Williamson, 2008)

Hybrid contracting style	Characteristics
Muscular	Peremptory, "use and discard" – myopic and inefficient
Benign	Promotion of continuity and realisation of mutual gains. Trust more important than power as the key concept, assumes cooperation to deal with unforeseen contingencies
Credible	Mutually hard contracts, but inbuilt forward looking mechanisms to cope with adaptation needs
Disequilibrium	Ad hoc structures due to time pressure resulting in extra risks

Williamson (2008) identified four hybrid mode contracting styles (Table 1) that reflect the interfirm governance process. The obvious suggestion is that for the long term network business operation the focus needs to be in establishing contracts (or relationships) that are closer to Williamson's benign or credible styles than the others, as muscular and disequilibrium inevitably are not long lasting.

As TCE is primarily concerned in dyadic relationships the issues of information transparency become also very important. The Agency theory (Eisenhardt, 1989) explains in the cases of non-fully transparent information the parties are not fully aware or at least cannot fully verify the behaviour of the other party. This applies for goals as well as for actions to be taken. Another fundamental point the Agency theory highlights are the differences in attitude towards risk, resulting in different decisions for risk mitigation. The theory cites specifically two aspects of the agency problem. Moral hazard refers to lack of effort on the part of agent. In other words a party (in a network) simply does not put forth the agreed-upon effort i.e. is shirking. Adverse selection refers to misinterpretation of agent's abilities. This means that the presumption or expectation of the competence or performance of a party when forming a business network is higher than it actually is, leading constantly to lower than expected outcomes.

Furthermore, in case of network business the TCE related thinking needs to be extended further to systems. This is largely what the Supply Chain Management (SCM) research contributes. In the movement from merely dyadic relationships to consider more the value chain or maybe more precisely the value network and its optimisation the SCM begins to reflect the behaviour and need for more networked approach.

2.2 Social capital and Networks – sociology contributions

2.2.1 Foundation for network theory

Network theory has bits and pieces in many fields of science. Grandiori and Soda (1995) identify several approaches in their study of social science approaches for Inter-firm networks. They found the previously highlighted economic approaches of industrial economics. In addition to those contributions have been made in Organisational economics highlighting for instance flexibility as a major property of

networks in terms of capability to change firms' output as well as its arrangement. Negotiation analysis has been looking into exchanges of resources and behaviours and how these are regulated leading to game theoretical approaches. Views on Resource dependence add to the discussion the notion of strategic manipulation of transactions and games aimed at changing the relationship of interdependence to one's own advantage. This contributes to the understanding on the directions relationships develop. Legitimation is added as a core resource by the neo-institutional approach.

Organisational sociology introduces concepts of social- and cultural embeddedness (Granovetter, 1983) arguing elementary forms of social co-ordination such as acquaintance and communication are the basis for more elaborate structures to emerge. Radical and Marxian studies consider the networking strategies and behaviours that cannot be explained by efficiency or effectiveness by power mechanisms and class dominance.

On social psychology side an important tradition of networks is Social network Theory applied in small-group research – for inter-firm co-ordination this has been applied to the study of emergence and change of informal structures and network boundaries among others.

Strategy and general management perspectives have utilised many arguments from the other theories. Industrial marketing with Håkansson and Johansson (1992) contributes to network approach and to entrepreneurship. Final identified approach are population ecology models with natural-selection perspective focusing mostly on survival rates of networked firms compared to isolated ones.

Based on Granovetter (1983) all economic relations between firms take place within a web of pre-existing social relationships. This sets limits to the direction and forms in which economic relationships can develop. The web consists of strong ties with those one has close relationship on several levels. Each individual as well as each firm has a group of such contacts – an inner circle. Then there are plenty of acquaintances. These are called weak ties. The importance of weak ties is in bridging different inner circles with each other thus enabling information flow from one group of strong ties to another one. Furthermore, individuals with many weak ties have access to information from distant parts of the social system instead of being limited to the local news and views of their close friends. In broader picture the argument is that social systems

lacking weak ties will be fragmented and incoherent leading to slow speed of innovation and stagnation.

2.2.2 Social capital

In common language social capital as a term is widely used in numerous contexts and meanings ranging from fairness in a team work to good manners in social interaction situations. Also in the field of research Adler and Kwon (2002) found 19 definitions for social capital.

For the purpose of this study the definition and framework by Nahapiet and Ghoshal (1998) is used with an extension provided by Knoke (1999) that defines social capital as the process through which actors create and mobilise their network connections within and between organisations to gain access to other actors' resources. With this extension a link between Industrial Network Approach and Social Capital has been established. (Westerlund and Svahn, 2008)

The Nahapiet and Ghoshal (1998) framework consists of three inter-related dimensions that build on top of each other. These are illustrated in Figure 2.

Structural embeddedness concerns the properties of the social system and of the networks relations as a whole. In other words this dimension reveals the possible connections/links/network ties between actors in a network as well as the related characteristics such as density, connectivity, hierarchy and so on. This is the prerequisite to start building social capital – the connection.

Cognitive dimension refers to those resources providing shared representations, interpretations and systems of meaning among parties. To put it differently: via cognitive aspects actors are able to establish common language to convey information. In addition to understanding cognitive dimension as a separate element, it can be seen also as a next layer on top of structural dimension as this forms the common language or communication protocol.

Table 2: Definitions of Social Capital (Adler and Kwon, 2002)

External vs. Internal	Authors	Definitions of Social Capital
External	Baker	"a resource that actors derive from specific social structures and then use to pursue their interests; it is created by changes in the relationship among actors" (1990: 619)
	Belliveau, O'Reilly & Wade	"an individual's personal network and elite institutional affiliations" (1996: 1572)
	Bourdieu	"the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition" (1985: 248) "made up of social obligations ('connections'), which is convertible, in certain conditions, into economic capital and may be institutionalized in the form of a title of nobility" (1985: 243)
	Bourdieu & Wacquant	"the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (1992: 119)
	Boxman, De Graaf, & Flap Burt	"the number of people who can be expected to provide support and the resources those people have at their disposal" (1991: 52)
	Knocke	"friends, colleagues, and more general contacts through whom you receive opportunities to use your financial and human capital" (1992: 9) "the brokerage opportunities in a network" (1997b: 355) "the process by which social actors create and mobilize their network connections within and between organizations to gain access to other social actors' resources" (1999: 18)
	Portes	"the ability of actors to secure benefits by virtue of membership in social networks or other social structures" (1998: 6)
	Internal	Brehm & Rahn
Coleman		"Social capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: They all consist of some aspect of social structure, and they facilitate certain actions of individuals who are within the structure" (1990: 302)
Fukuyama		"the ability of people to work together for common purposes in groups and organizations" (1995:10) "Social capital can be defined simply as the existence of a certain set of informal values or norms shared among members of a group that permit cooperation among them" (1997)
Inglehart		"a culture of trust and tolerance, in which extensive networks of voluntary associations emerge" (1997: 188)
Portes & Sensenbrenner		"those expectations for action within a collectivity that affect the economic goals and goal seeking behaviour of its members, even if these expectations are not oriented toward the economic sphere" (1993: 1323)
Putnam		"features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit" (1995:67)
Thomas		"those voluntary means and processes developed within civil society which promote development for the collective whole" (1996: 11)
Both	Loury	"naturally occurring social relationships among persons which promote or assist the acquisition of skills and traits valued in the marketplace... an asset which may be as significant as financial bequests in accounting for the maintenance of inequality in our society" (1992: 100)
	Nahapiet & Ghoshal	"The sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit. Social capital thus comprises both the network and the assets that may be mobilized through that network" (1998: 243)
	Pennar	"the web of social relationships that influences individual behaviour and thereby affects economic growth" (1997: 154)
	Schiff	"the set of elements of the social structure that affects relations among people and are inputs or arguments of the production and/or utility function" (1992: 160)
	Woolcock	"the information, trust, and norms of reciprocity inhering in one's social networks" (1998: 153)

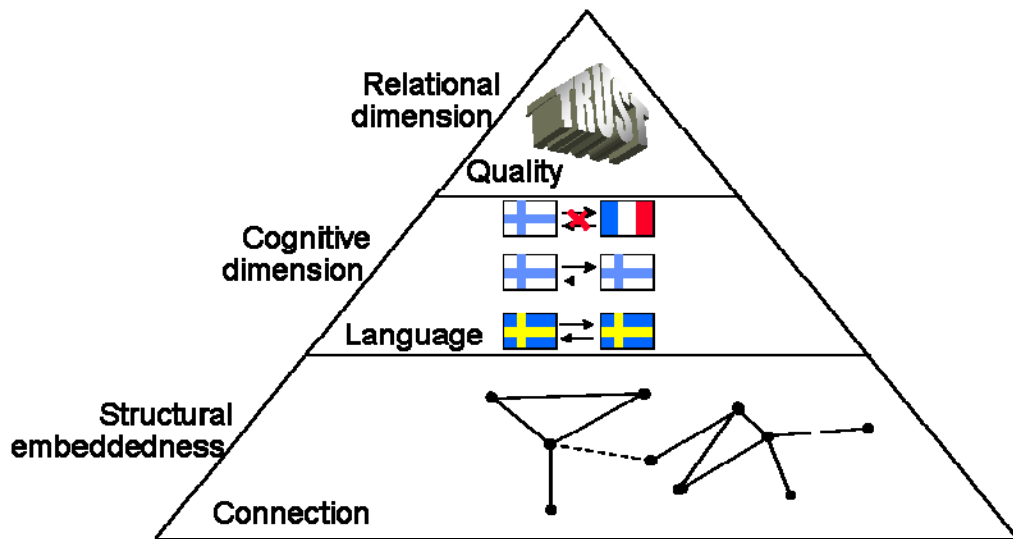


Figure 2: Social capital dimensions (Nahapiet and Ghoshal, 1998)

Relational embeddedness describes something about the nature of the relationships the people have developed with each other in various encounters. Very important characteristic is the presence or absence of trust and trustworthiness. Relational dimension can also be understood as the quality aspect of the relationship – in a way as the characteristics of the content – founded on the two other dimensions.

A list of various Social Capital elements identified in different studies is presented in Table 3 compiled by Tuutti (2010).

A unique characteristics of social capital compared with the other forms of capital is that it is jointly owned and therefore it is rather difficult to trade (Nahapiet and Ghoshal, 1998) – using Williamson's terms social capital is a specific asset. The value aspect of social capital has been addressed by Yli-Renko et al. (2001) in stating that social capital facilitates knowledge acquisition and exploitation by affecting conditions necessary for the creation of value through the exchange and combination of existing intellectual resources. Westerlund and Svahn (2008) simply acknowledge that social capital is the basis for value in relationships.

Table 3: Social Capital dimensions and elements (Tuutti, 2010)

Element of Social Capital	Author(s)
Structural	
Presence or absence of network ties	Nahapiet & Ghoshal, 1998
Network configuration	Nahapiet & Ghoshal, 1998
Density	
Connectivity	
Hierarchy	
Closure	Coleman, 1988
Tie strength	Granovetter, 1973
Structural holes	Burt, 1992
Cognitive	
Shared language	Nahapiet & Ghoshal, 1998; Lesser, 2000
Acronyms	Lesser, 2000
Subtleties	Lesser, 2000
Underlying assumptions	Lesser, 2000
Codes	Nahapiet & Ghoshal, 1998
Narratives/Stories	Nahapiet & Ghoshal, 1998
Common context	Lesser, 2000
Relations	
Norms	Coleman, 1988; Portes, 1996; Sandefur & Laumann, 2000
A collectivist of a group norm (A norm of) reciprocity	Coleman, 1988; van den Hooff et al., 2004 Lesser, 2000; Putnam, 1995; Adler & Kwon, 2002
Identification and identity	Nahapiet & Ghoshal, 1998
Social solidarity	Sandefur & Laumann, 2000
Obligations	Nahapiet & Ghoshal, 1998; Coleman, 1988
Expectations	Nahapiet & Ghoshal, 1998; Coleman, 1988
Sanctions	Coleman, 1988
Trust and Trustworthiness	Lesser, 2000; Coleman, 1988
Friendship	Nahapiet & Ghoshal, 1998
Respect	Nahapiet & Ghoshal, 1998

2.2.3 Strategic networks

Instead of selling products/contributions openly to the market or alternatively supplying within the hierarchically integrated firm, a firm can operate in the Strategic Network domain under different rules. This replacement has been noted by several researchers (Westerlund, 2009)

Firm is embedded in a network of ongoing business and non-business relationships. This enables and constrains performance (Ritter et al 2004). Especially in the knowledge-intensive industries networking produces value for network participants by for instance enabling access to information and skills that would not be available otherwise (Swaminathan and Moorman, 2009). Further, networking enables specialisation and focus as each network participant does not need to replicate all required competencies in order to form sufficiently widely covering product offering.

Networks are sets of relationships between firms, where companies connect in various ways to bring products or services to the market (Aldrich, 1998). A basic form (of a network) is a dyad of two actors; complex networks consist of relationships among more than three actors (Anderson et al, 1994).

Strategic networks are deliberately created, organised cooperation between companies with purpose to reach common objective. As such it is expected that strategic networks have more established structure than unplanned organic networks. Therefore, it is plausible to argue that firm's positions or strategic network identities enable some actors purposefully to direct the whole network and its operation towards the goals (Westerlund, 2009). Furthermore, knowledge-intensive industries such as software industry necessitate strategic networking for firms to cope with uncertainty and turbulent environment (Cravens et al, 1996).

2.2.4 Industrial Network and Interaction Approach

Relationships are dynamic processes of exchange among actors in an industrial market (Turnbull et al, 1996). The interaction theory focuses on the focal actor's direct relationships, whereas the Industrial-Network Approach (INA) extends the focus to indirect relationships, (Rajala and Westerlund, 2007).

Rajala and Westerlund (2007) highlight the fundamental network elements identified by Håkansson and Johansson (1992). They are actors, resources and activities. These are illustrated in Figure 3. Actors in this context perform and control activities that are based on control over resources, and develop relationships with each other through exchange processes. Activities in turn occur when actors combine, develop, exchange or create resources by utilising other resources in the network.

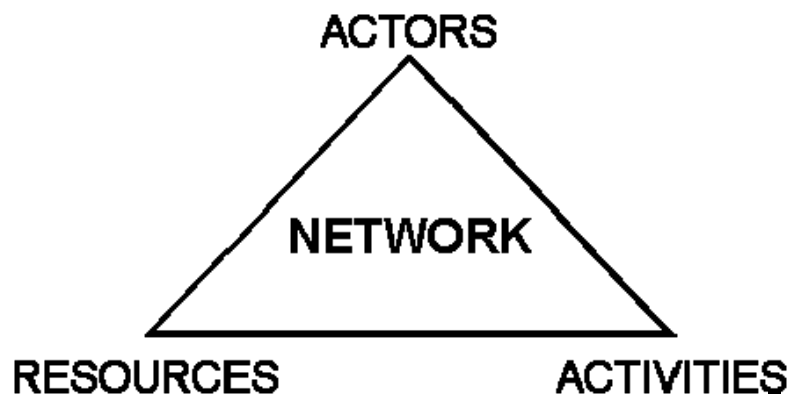


Figure 3: Fundamental network elements (Håkansson and Johansson, 1992)

The combinations of activities impact business performance and as far as the activities are mutually intentional then it is fair to expect these to be reflected in the firms' strategies as well as in the business models. Further, the level of social capital in the network ought to impact at least the intensity and manageability of the activities in the network.

2.2.5 Network governance

Efficient coordination is vital for a group of companies forming a network in order to be able to provide any kind of output. There are a multitude of different definitions and variety of terms such as "network organization" (Miles and Snow, 1986) that have been used to refer to inter-firm coordination that is characterised by organic or informal social systems, in contrast to bureaucratic structures within firms and formal contractual relationships between them. Jones et al. (1997) call this form of inter-firm coordination "network governance". Some of the different definitions are presented in the Table 4.

Definition by Jones et al. (1997) brings different aspects of the previously presented definitions together:

"Network governance involves a select, persistent, and structured set of autonomous firms (as well as non-profit agencies) engaged in creating products or services based on implicit and open-ended contracts to adapt to environmental contingencies and to coordinate and safeguard exchanges. These contracts are socially – not legally – binding."

The *select* in the definition refers to a sub set of available companies and *persistent* to frequent dealings – exchanges – with each other. The exchanges are not random or accidental, but patterned i.e. *structured*, where the network governance is the dynamic process of organising them. Further, Jones et al. (1997) define the firms to be *autonomous* i.e. legally independent, although most of the network governance related things are probably valid even, if a degree of cross-ownership exist as long as coercive power based on hierarchy is not exercised. This thought appears to be integrated into highlighting the *implicit and open-ended* nature of the contracts, meaning that adaptation, coordination and safeguarding of exchanges is not derived from the authority structures (hierarchy in the context of TCE) or from the legal contracts (market mode in the TCE). This does not necessarily require that there are no legal contracts – probably there are, but the primary co-ordination mechanisms and the reasons for honouring mutual agreement are more on the social level.

Table 4 Variety of terms and definitions used for Network Governance. (Jones et al, 1997, Table 1)

Reference	Team	Definition of Network Governance
Alter and Hage, 1993	Interorganisa-tional networks	Unbounded or bounded clusters of organisations that, by definition, are nonhierarchical collectives of legally separate units
Dubini and Aldrich, 1991	Networks	Patterned relationships among individuals, groups, and organisations
Gerlach and Lincoln, 1992	Alliance capitalism	Strategic, long term relationships across a broad spectrum of markets
Granovetter, 1994, 1995	Business groups [*]	Collections of firms bound together in some formal and/or informal ways by an intermediate level of binding
Kreiner and Schulz, 1993	Networks	Informal interorganisational collaborations
Larson, 1992	Network organisational forms	Long-term recurrent exchanges that create interdependencies resting on the entangling of obligations, expectations, reputations, and mutual interests
Liebeskind, Oliver, Zucker and Brewer, 1996	Social networks	Collectivity of individuals among whom exchanges take place that are supported only by shared norms of trustworthy behaviour
Miles and Snow, 1996, 1992	Network organisation	Clusters of firms or specialised units coordinated by market mechanisms
Powell, 1990	Network forms of organisation	Lateral or horizontal patterns of exchange, independent flows of resources, reciprocal lines of communication

^{*}) Not all business groups are characterised by networks of co-operation (1995)

An interesting extension to the firm relationships is the notion that the network governance may be composed of autonomous firms that operate like a single entity in those tasks requiring joint activity – in other domains they may be fierce competitors.

Network governance brings the TCE theory together with the social network theories. Its' relevance is in investigating the mechanisms that come to play when there is a need for adaptation, whereas in equilibrium there is very little or perhaps not at all governance over the relationship required.

Following the TCE point of view the most efficient governance form is determined by the exchange conditions – uncertainty, asset specificity and frequency (Table 5). Out of these it is foremost the environmental, i.e. demand, uncertainty that triggers adaptation and creates the need for network governance.

Under circumstances where there are asset specific (or customised) exchanges the parties are interdependent from each other i.e. unique equipment, processes or knowledge developed by participants is required to complete exchanges. This intensifies coordination between parties.

If the frequency of exchanges is high this facilitates transferring tacit knowledge and establishes conditions for relational and structural embeddedness providing the foundation for social mechanisms to adapt, coordinate and safeguard exchanges effectively - in other words creates social capital. Further, high frequency contributes to the cost efficiency in using specialised governance structures i.e. "unit cost" becomes lower. In relation to Social Capital high frequency presupposes that structural embeddedness is also high in terms of frequent connection leading to strong ties as well as over time to high cognitive dimension i.e. good mutual understanding.

Table 5: Conditions for network governance to prevail (Williamson, 2008)

Condition	Clarification
Demand uncertainty with stable supply	Demand uncertainty calls for flexibility and quick reactivity in supply as well as in information dissemination as technologies and knowledge change/out-date. Also demand uncertainty can be caused by seasonality. The opposite case of stable demand, but uncertain supply leads quickly to vertical integration, especially as the integration can be financed by income, which could not otherwise be obtained.
Customised exchanges with high levels of human asset specificity	Customisation together with demand uncertainty increase behavioural uncertainty by increased risk of disagreement on content of the customised exchange as well as disagreement whether parties fulfil their initial agreed-upon obligations under changed circumstances Customisation with high levels of human asset specificity require organisation form that enhances cooperation, proximity, and repeated exchanges to transfer efficiently tacit knowledge between parties
Complex tasks under time pressure	Task complexity refers to the number of different specialised inputs needed to complete a product or a service. It creates behavioural interdependence and heightens the need for coordinating activities. This added with time pressures makes coordinating through a series of sequential exchanges unfeasible (i.e. need to reduce lead-time or cost)
Frequent exchanges among parties comprising the network	Frequent exchanges justify and enable using inter-firm networks as an alternative governance form contributing to learning-by-doing, transfer of tacit knowledge and deepening the relations creating a unique identity to exchange partners. Allows informal control through embeddedness.

All in all this can generate a positive cycle that promotes the maintenance of the relation versus seeking to establish new relations with all the related establishment cost. In this way network governance form can become more efficient than other governance forms when it excels in addressing issues of adapting, coordinating and exchange safeguarding.

2.2.6 Business networks

Erwee (2001) quotes Hastings' Business Network definition: "the implementation of a range of social, cultural and technological processes that result in a devolution of power and responsibility and the breaking down of organisational boundaries. This facilitates direct person-to-person connections, sharing of information and joint working (both within and between organisations) in order to pursue common

objectives, solve problems and satisfy the expectations of internal and external stakeholders more effectively and rapidly"

An important notion in the definition is that a business network is an implementation or realisation of set of firm intern and inter-firm *processes* that shift power and accountability between organisations. However, process development is seldom mentioned as a key task in creating business networks. In fact the lack of emphasis on common processes may be one of the most important factors, why many business networks fail to deliver the expectations.

The reasons for forming networks are versatile. As listed by Erwee (2001) some firms are looking forward to generate economies of scope or scale for the company, some desire to manipulate the competitive structure of the market or technological alliances. At times gaining access to partners implementing technological change is the driver, but also quite simply one is seeking jointly to find ways to reduce costs and improve product quality. Also changes in environment such as ever increasing demand for efficiency i.e. higher quality with lower cost as well as rapid knowledge dissemination encourage seeking for help in forming networks.

The above were top management strategic reasons. However, once a strategic decision has been taken then the team i.e. the persons actually dealing with each other across organisation boundaries need to further develop set of reasons to evolve into a high performance team that delivers. According to Erwee (2001) the high performance teams are characterised by participative leadership, shared responsibility, alignment on goals, effective communication, mutual trust, focus on the future, rapid response and using all the diverse talents of members creatively. To enable a high performance team to work the working environment needs to be exceptionally encouraging requiring processes to be performance instead of management oriented. Such processes are not established overnight. Instead different stages of a network development are linked with different key processes.

Batonda (1995) synthesised the network development in ideal case into five consecutive states (see Table 6) and processes beginning from searching for the relationship, starting it and moving via development and maintenance to the process of termination the relationship. It is worth noting that in praxis the network relationship development process is not an orderly progression of phases over time, but it is essentially an evolution of unpredictable states (Batonda et al., 2001).

Table 6: Network development stages/states model (Batonda, 1995)

Dimensions	Activities
Stage 1 Relationship searching process	Search and trail for partners Evaluation of partners based on economic and social aspects; no commitment
Stage 2 Relationship starting process	Identification of inter-firm and interpersonal dynamics; selective entry based on abilities and intermediate and long term compatibility; defining mutual goals
Stage 3 Relationship development processes	Joint planning efforts; evaluation of relationship for mutual obligations of performance and effectiveness; increase interdependence through enhancement of mutual benefits; value creation through synergistic combination of partner's strengths; commitment of resources and people to relationships
Stage 4 Relationship maintenance processes	Integration of operations and strategies; increased commitment through institutionalised conflict resolution procedures ; long term rewards based on mutual behaviour and trust; adaptations and adjustment through agreement, negotiation and self control
Stage 5 Relationship termination processes	Termination based on mutual interest and cost benefit analysis of continuing in the network; developing strategies to mutually dissolve the relationship

In the beginning of a relationship (stage 1) the focus is on finding partners that answer to the economic needs and could be socially fit – so far very little commitment or trust has been established. Once firms have found each other (stage 2) the inter-company and interpersonal dynamics need to be identified to enable entering into more or less formal state of relationship. This is the time when joint goals are set and bonding must start to emerge (Erwee 2001 referring to Buttery and Buttery 1994). Joint planning efforts as well as evaluation of obligations and performance are on the agenda as the relationship is developed (stage 3). During this time a party's ability to commit and trust more i.e. take risk in the relationship boost the development significantly (Larson, 1992). In slow changing world the network would then move to maintenance and harvesting the benefits, however, many times the environment is so dynamic that the relationship moves constantly between the development stage and maintenance until it for reason or other is terminated. The planned and orderly manner described in Batonda in stage 5 is probably more an exception than a rule, when relationships come to end.

Networks – especially business networks of equals – are difficult to establish and maintain. Erwee (2001) has classified dilemmas of network dynamic into three categories, namely issues with interdependency, competition and cooperation; and trust.

By sharing and utilising expertise or resources the network members contribute to interdependency. In case of a supply chain all members are dependent on each other contributions sequentially. In a network, where members make expertise available to each other, the interdependency takes a form of a central pool. Clearly having the ability to utilise some-else's specialised resources enables a firm to focus its own resources more productively and probably also achieve higher utilisation rate. In addition to this, over time firm is likely to learn from the other members in the network that increases its own knowledge base. On the other hand, in order to enjoy the benefits of a network the firm needs to contribute and accept some limitations to its freedom.

Other dilemma for network members to cope with is a question of competition and cooperation. Both tend to be opposite forces and many times one of the root causes of network instability. Cooperation relates to members joint efforts to work for achieving common goals such as capturing market share or delivering a service with agreed quality – it is the behaviour that carries the network further. Competition in a network in turn may have the opposite – negative – impact, in particular when a firm tries to capture market share from another network member. Although sometimes some level of competition can also increase the overall performance of the network, when there is also network internal drive for constant improvements. All in all whether to contribute to the network and deepen the interdependency or not is businesswise an economic question related to transaction cost (See 2.1.2). But it is also an issue for social relationships. The involved persons may pursue economically the best solution, however, their driver may also be something else.

Developing trust or social capital (See 2.2.2) in more general is an essential component in order to get a network functioning. Erwee (2001) defined trust as the willingness to rely on a partner in whose integrity and reliability one has confidence as the trust has been earned and built up over time. Trust in a network needs to be constantly nurtured economically by keeping the network competitiveness on the level that the members of the network will be worse off if they behaved opportunistically

and put their partners at risk. In similar fashion the person to person relations should be nurtured. Otherwise a member will renege i.e. knowingly break a promise. Incongruence i.e. different understanding of commitments and promises are to happen, but in a network of high trust the likelihood of finding a way to a common solution or at least a mutually respectable way out is far higher than in mere supplier relationship.

2.3 Business models

In the study of business models various definitions have been used. The business models seem to consist of rather different components depending on the particular view the writer has chosen. The ones identified by Shafer et al (2005) mainly from E-business literature are listed in Table 7.

Business model of a firm is the manifestation of firm strategy and processes. It describes the strategic and operational choices that create value to all actors in the inter-organisational business network and creates competitive advantage for the firm. Moreover, Shafer et al. (2005) describes business model to be a tool for analysing, implementing and communicating strategic choices.

Considering the previous business model components, the most commonly used business model value elements (Shafer et al. , 2005) appear to be:

- offerings as the firms value propositions
- assets and capabilities as resources needed to develop and implement a business model
- the economic model or revenue logic
- relationships with actors in business networks

Table 7: Components of 12 business model definitions (Shafer et al, 2005 Table 1)

Component / Context	Timmers (1998) E-business	Hamel (2000) Strategy	Afuah and Tucci (2001) E-business	Amit and Zott (2001) E-business	Weill and Vitale (2001) E-business	Dubosson-torbay et. al (2002) E-business	Magretta (2002) Strategy	Rayport and Jawoski (2002) E-business	Van der Vorst et. al. (2002) E-business / Supply Chain Man.	Hague (2002) Technology	Chesbrough (2003) Strategy	Hedman and Kalling (2003) Information systems/Strategy
Value network (suppliers)	x	x			x	x			x	x	x	x
Customer (target, market, scope)		x	x			x	x	x		x	x	
Resources/assets		x		x		x		x		x		x
Value proposition		x				x	x	x			x	
Capabilities/competencies		x	x	x		x						x
Processes/activities		x	x			x			x			x
Revenue/pricing	x	x	x			x					x	
Competitors								x		x		x
Cost						x	x				x	
Information flows	x			x	x							
Output (offering)				x				x				x
Product/service flows	x			x	x							
Strategy		x								x	x	
Branding						x				x		
Customer information		x				x						
Customer relationship		x				x						
Differentiation		x								x		
Financial aspects						x		x				
Mission		x								x		
Profit						x	x					
Business opportunities				x								
Cash flows					x							
Create value				x								
Culture												
Customer benefits								x				
Customer interface		x										
Economic logic							x					
Environment										x		
Firm identity										x		
Firm reputation										x		
Fulfilment and support		x										
Functionalities									x			
Implementation			x									
Infrastructure-applications									x			
Infrastructure-management						x						
Management												x
Product innovation						x						
Specific characteristics									x			
Sustainability			x									
Transaction content				x								
Transaction governance				x								
Transaction structure				x								

Based on this Shafer et al. (2005) define a business model as "a representation of a firm's underlying core logic and strategic choices for creating and capturing value within a value network."

This definition has four key terms:

- *core logic*: business models helps to articulate and make explicit key assumptions about cause-and-effect relationships and the internal consistency of strategic choices
- *strategic choices*: business model reflects made choices
- *creating and capturing value*: business model illustrates how firm differentiates (competencies, capabilities, positional advantages, ...) in order to create profit in the end of the day.
- *value network*: role in the networks (suppliers, partners, distribution channels, coalitions ...)

These business model components are represented in an affinity diagram in Figure 4.

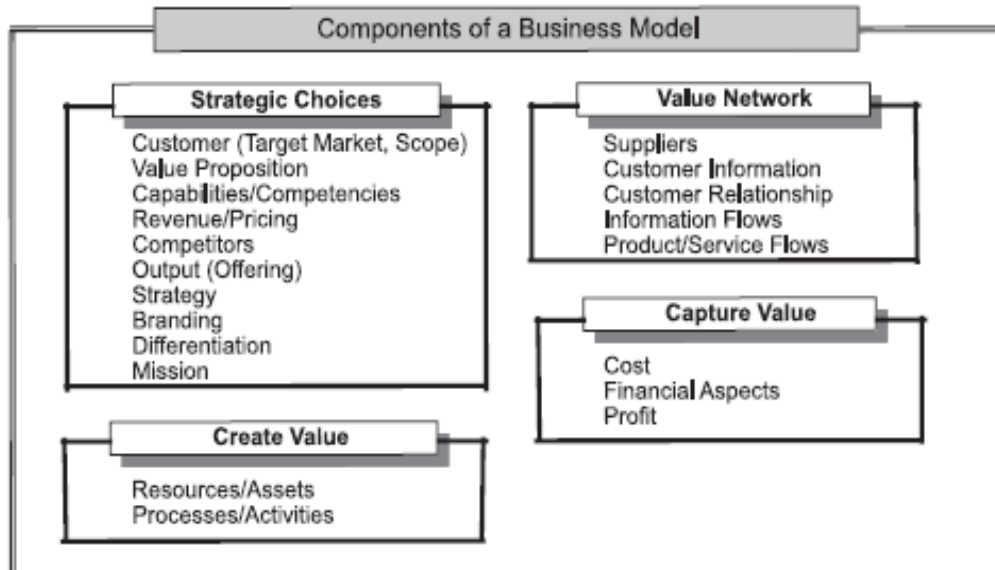


Figure 4: Business model components for representing a firm's core logic for value creation (Shafer et al, 2005 Figure 1)

In order for a business model to serve its purpose special attention needs to be given to the assumptions of the core logic. Any major flaw there will inevitably lead to false results. Another equally dangerous issue is too narrow selection of strategic choices – one should not be satisfied with the obvious answers. Furthermore, even when high

value might be created, but for reason or other one would fail in value capturing the efforts would go vain.

The same flawed result comes when the value network does not perform as expected. Especially in networked business any (unexpected) change in value network may have catastrophic impact. Striking the balance between trust and mistrust or dependency vs. independency is very difficult.

3 Network model

3.1 Creation of a network business model

3.1.1 Generic dilemma of network business models

Network business model is significantly more complicated than a business model for a single firm. The fundamental reason for this is that the decision power is distributed over the network participants. In a single firm case the firm management reports and is responsible to the firm's share holders, whereas in case of a business networks there is an entire set of separate share holders with various reasons for their investment.

Fundamentally in a single firm case the formal decision power lies with a single person - the Chief Executive Officer, but for the networked business there are multiple entities that need to be aligned in order to keep the network from diverting. This means that the network needs to have a strong common goal setting and the network participants need to be committed to it for their part (Virtanen, 2007). In order for them to be committed the network and its goal need to provide economical benefits for each individual - for the network to last, the economical benefit needs to be sustainable, otherwise sooner or later someone will step aside forcing the network to either reform or to collapse.

However, the economical benefit and common goal setting are not sufficient. The organisations need to be capable to work together – on organisation to organisation level as well as on person to person level. The social capital needs to be strong enough to create trust and desire to stand side by side. Shared values are one significant contributor for establishing the social capital. In this sense the networks needs to provide also sustainable personal non-moneytary benefit.

In a single firm hierarchical power enables the management to set the direction and determine what research and development does. Even if R&D is not performing very well, one tends to first take an effort to improve it, before dismantling a function altogether. The overall competitiveness of the company depends on generic capabilities in competencies, processes and so on as well as on the available human and financial resources. The market information is conveyed mainly by two internal functions namely by sales and marketing and customer support.

Likewise an aligned small business network has greater resources, more competencies and greater access to information, but also greater risks and challenges to maintain the common view. In larger business networks the complexity increases exponentially with the increase of network member amount, at the same time also the possibilities to tackle various requirements increases.

3.1.2 Specific characteristics of software business

In Wikipedia software has been described as a set of programs, procedures, algorithms and its documentation. In computer science and software engineering, software is all information processed by computer system, programs and data. The academic fields studying software are computer science and software engineering. Further, Software Business has been defined as the commercial activity of the software industry, aimed at producing, buying and selling software products or software services. Despite of Wikipedia not being a solely reliable source these definitions provide well the generic idea.

In OECD (2006) study software has been described as comprising four broad areas: systems infrastructure, applications development, mobile and embedded software; and applications solutions.

Within these four areas there are nine subsectors. These subsectors encompass a range of tools and activities, including client-server operating systems, application programs and programming languages, interoperability software, operating systems for mobile devices, enterprise resource planning and personal productivity tools

The software industry can be divided into primary software companies that conduct software business as their main activity and to the secondary software industry that are the companies that focus on some other industry, but use software as part of their products or services. The main activities can be categorised into tasks like development, maintenance and publication of computer software or software related services (BMBF, 2000).

In this study the software business is defined in terms of production of software for sale as stand-alone software and not embodied in other non-ICT products. That is,

software which is embedded in other applications – controls of motor car engines, for example – is not included.

The most remarkable characteristic of software business is the nature of software itself. Software is bits i.e. it is intangible. It can be copied over and over again without reducing the quality of the original one. Thus reproduction cost for software is very low. Therefore economics of scale – volume – contributes very strongly to profit.

The easiness of software duplication on the other hand has led to different kind of concept of defining what is being sold. Software ownership is generally not sold, but instead a right to use it i.e. a user license. Open Source Software (OSS) forms an important exception as it is license free. There the business is more in the related work such as integration and training.

With the development of communication possibilities, especially internet, there is now freedom of choice whether to have the software applications run and governed on local that is on customer's hardware or alternatively by a service provider in its premises. In fact cloud computing, Software as a Service (SaaS) or Application Service Providing (ASP) have become recently very popular buzz words in the IT sector.

Today more and more applications are being offered as a service. In its purest format the application is provided plainly via internet web-browser such as Explorer or Firefox – this does not require any installations in the customer end. Very common such service is for instance internet banking. The next stage towards more traditional client-server approach is locally installed applications such as apps on a mobile phone or on a tablet like iPad.

From business point of view an Application Service Provider offering applications simply via internet browser has the service available anywhere, anytime without responsibility of any local customer end installations as it is just made available in the internet – connection to internet is a duty and responsibility for the customer.

The judgement for a company to opt for an application service or for on-premises own installation depends on many factors. Some of them are related to security and privacy concerns about internet. Also ability to self manage and control the IT systems under all circumstances can be very important for some. Other one is the required information exchange with other on-premises systems and of course also local IT

competencies and capabilities play a significant role. Beyond these also some applications are more suitable being provided as a service than others.

3.2 Models classified by business logics

In this section different models of business networks using different business logics are presented and evaluated on the bases of the theory presented in the previous chapter.

The models for business networks addressed are

- Operation under principal
- Optimised supply chain
- Co-support
- Dual business logic

These were created and selected as they represent different approaches for addressing the customers, governing the network internal responsibilities as well as they possess different characteristics for adjusting to internal or external disturbances. In the logic creation, presentation and evaluation the angle of software business has been kept in mind.

3.2.1 Network operating under a "principal"

A business network that consists of multiple suppliers delivering their output via a common party in the customer interface is called here as the "multiple supplier network for common offering of principal". This is illustrated in Figure 5.

In this kind of business network the strategic choice has been made to dedicate customer interface exclusively to a single entity making this one as the principal as it is the only direct legal party responsible for the offering in front of the customer. Obviously contractually and operationally the responsibility can and will be cascaded further, but nevertheless from the customer's point of view the principal is accountable.

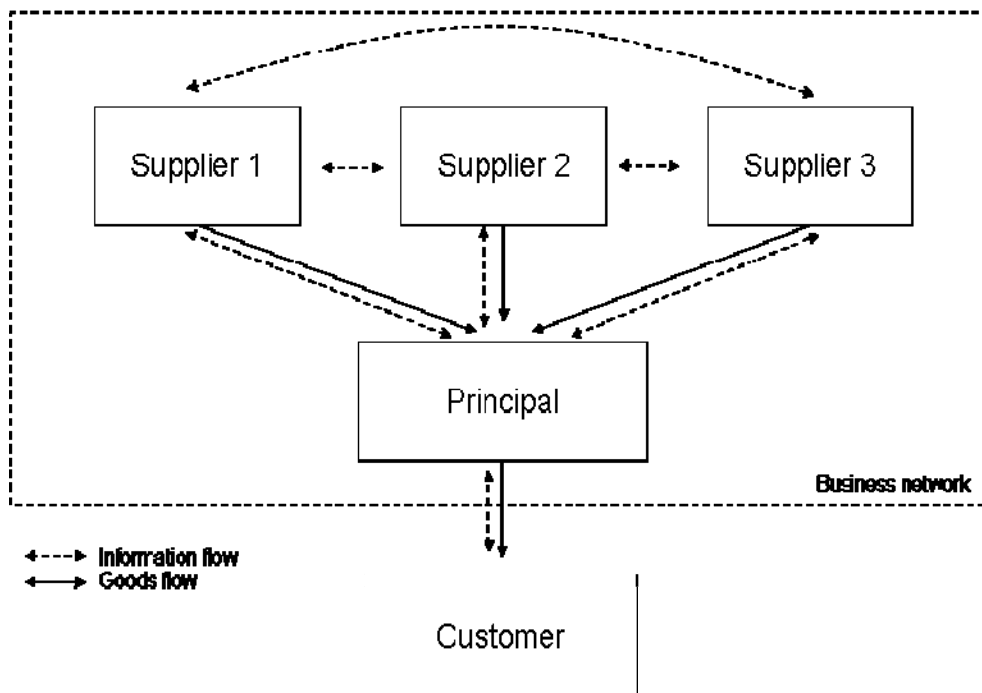


Figure 5: Multiple supplier network for common offering of principal

This strategic choice has also other profound implications. In praxis this means that this business network is highly specialised with the suppliers focusing in their core competence area.

The principal is responsible for representing as well as largely building the business network brand, all the external communications and marketing. As the sole interface to the customers one of its most crucial tasks is to understand the customers and their requirements. Should the principal fail in this task then the entire business network drops out of track. Even when the principal manages to understand the customers and the market, still it needs to feed the information to the rest of the business network successfully and furthermore orchestrate the offering to be competitive. This means answering to questions like value proposition, differentiation, required offering as well as pricing.

However, long term strategy should not be solely dictated by the market feedback, but should be based also on unique capabilities, competencies and possibilities the entire business network possesses.

Considering the value network for principal led business network quite important are stable and long lasting supplier relations with high functional specialisation. In order for these to take place strong information flow between all parties including directly from a supplier to another needs to prevail to enable each member to optimise for the business network benefit. This comes close to modular product creation schemes, where the products flow to the principal that composes the final customer offering. In many ways the principal has a strong gatekeeper role and responsibility to take care of the front end of the customer relationship. Here the phenomena studied in Agency theory (Eisenhardt, 1989) comes also to play. The parties do not have fully transparent information i.e. parties are not fully aware or at least cannot fully verify the behaviour of the other party. This applies for goals as well as for actions to be taken. Further, the parties may have differences in attitudes towards risk resulting in different decisions for risk mitigation. The theory cites specifically two aspects of the agency problem. A network party might simply not put forth the agreed-upon effort i.e. is shirking resulting in Moral hazard. Adverse selection i.e. misinterpretation of ability by the agent in this case could mean that the presumption or expectation of the competence or performance of a party when forming the business network is higher than it actually is leading constantly to lower than expected outcomes.

Considering value creation, the suppliers create the sub-elements or modules of the offering and the principal takes care of the integration or packaging (unless these executing tasks have been allocated to one of the suppliers). Only the principal needs to have marketing, sales and customer delivery functions, but it does not need to have the executing part of development.

The product management function that translates the customer requirements i.e. value demand to offering i.e. to value supply is a key task – the principal does not need to be (solely) in charge of this, but it needs to deliver the input and verify the output.

Capturing value in the principal lead business network focuses most of all reducing overhead cost. In comparison to multifirm supply chain the business network can have less overhead especially if suppliers do not have all functions independent firms traditionally have i.e. it may be possible to run the business network with lower cost. Further, each supplier has natural need to look after their competence in order remain part of the customer offering. The same applies also for the principal - its marketing, sales and delivery operations need to be sufficiently well performing in order to attract the suppliers to stay in the business network. The principal in fact constantly needs to

be able to provide sufficient volume and probably also growth to the suppliers to enable them to stay focused in this business network as otherwise the suppliers are forced to seek for alternative sources of income leading easily to the need of establishing unnecessary functions and allocating unoptimised resources from the principal lead business network point of view. The requirement and expectation that every member takes care of their responsibility areas with high performance contains one major threat for the entire network as everyone is damaged by low performance of one.

Profit sharing is bound to be problematic over time as determining relative customer value of different entities and their "fair share" of profit is very difficult and leads easily to disputes and with that to collapse of the entire business network. A traditional way to overcome this is to load the business risk on the principal, which gains with the risk also authority over suppliers. However, whilst that is being done the principal needs to trust the suppliers on their quality and timely delivery in order to keep risk margins sufficiently low to remain competitive i.e. a traditional case of agency problem. Also pushing the risk solely to the principal reduces the financial power and risk taking capability only to the limits the principal can bear, whereas in risk sharing models the business network can seek for larger gains and greater access to the customers.

Considering this business network setup through the lens of Resource based View (Wernerfelt, 1984) then this model very strongly allocates different skills and competencies to different parties in the business network. This leads also to strong mutual need and dependency especially in the case that the business network members are not active elsewhere outside the network. All parties in the business network internally need to have access to each other. This is pre-requisite for establishing efficient internal communication and processes for managing the customer demand information and creation of product offering.

The Dynamic Capability View (Teese et al, 1997; Eisenhardt and Martin, 2000) is essentially interested in seeking answer to question how this business network model reacts to market changes. Presuming that the business network operates in very dynamic business segment such as in software industry then the speed of market changes and technology advancements forces every stakeholder to be adaptive as soon as the need arises. In that sense the business network has good chances to operate well, because as soon as information enters the business network then it is immediately

available for everyone to make adjustments. The challenge is that the adjustments probably need to be in co-ordinated fashion.

Using Transaction Cost Economics (TCE) theory (Williamson, 1975, 2008) to evaluate the principal lead business network then the network represents itself as a set of hybrid contracts. Following TCE thinking the network needs to overcome internal complexities, enjoy mutual trust and have mechanisms to cope with adaptation in order to gain benefits over hierarchy i.e. a single company.

Another look into the principal lead business network from the sociological theory point of view (Granovetter, 1983) reveals that should the business network have only external connections i.e. weak ties via principal then the suppliers are bound to become stagnant over time due to lack of different, potentially controversial flux of alternative thoughts and ideas. There is even a risk for the business network to develop group thinking (Nahapiet and Ghoshal 1998). However, in praxis this is unlikely. The participating companies may be very focused in working via the business network, but certainly the persons within the companies have professional and private strong and weak ties outside the realm of the network feeding in new ideas and perspectives. Furthermore, on the individual level the same applies even within the network – not everyone can be a "close friend" with everyone else. Having said that a potential weakness based on sociology is the narrow and very controlled access to customers.

Usability in software business

The principal lead business network can be seen as a more integrated variant of sub-contracting setup. In that sense it fits rather well for software business. Software products generally let themselves to be modularised enabling defining different functions and interfaces between functions. These can then in turn be allocated to different suppliers. Alternatively the responsibility sharing can also take place based on different activities such as architecture design, implementation, customer documentation, integration etc. Further, there are a number of talented software professionals that do not primarily enjoy sales and marketing activities, whilst at the same time prefer to work in a more entrepreneurial way.

This model is suitable for software project type of business. However, for software product and application service providing businesses this model sets challenges due to

intensive capital need upfront due to the payments first once the product or application service is ready and available.

In fact, the lack of capital as well as resources is also a reason for this type of consortia to be created. When the required end-product is large or very complex then it becomes either too difficult or risky for a single company to handle. Then a consortium with a lead partner – principal – is one solution to enable competition on the market.

Another considerable possibility is that two or more companies have more or less the same skill set. They might even compete in the home market. However, each one of them is too small to be taken serious internationally due to the risks of discontinuity and disability to respond to one's commitments. Then these companies can guarantee each other and by doing so convince a credible principal to include them as suppliers and their products into the joint customer offering.

3.2.2 Network operating as an optimised "supply chain"

In strategic choices a "business network operating as a supply chain" differs from dyadic relations when the entire value chain focuses on maximising the competitiveness of the (end) customer benefit. This is also the key to differentiation from competitors. In this case also the branding should be directed to serve the interest of the business network instead of any single company in the value chain.

Value is created in each step in the value chain. However, in contrast to traditional supply chain of dyadic relationships, where information flow uses the same channels in reverse direction to products flow, the business network operating as an optimised supply chain provides greater visibility to customer demand for each member, quicker reaction time as well as lower need for intermediate product storages. In this way the business network and from the customer's point of view the party in immediate customer interaction has good chances to establish and maintain rewarding customer relationship. This is presented in the Figure 6.

When the operation is optimised over the entire chain then the relative competitive position of the value chain should enable yielding higher market share, higher volumes, better brand recognition as well as higher profit margin that improves financial performance of all participants (Lee et al, 2000).

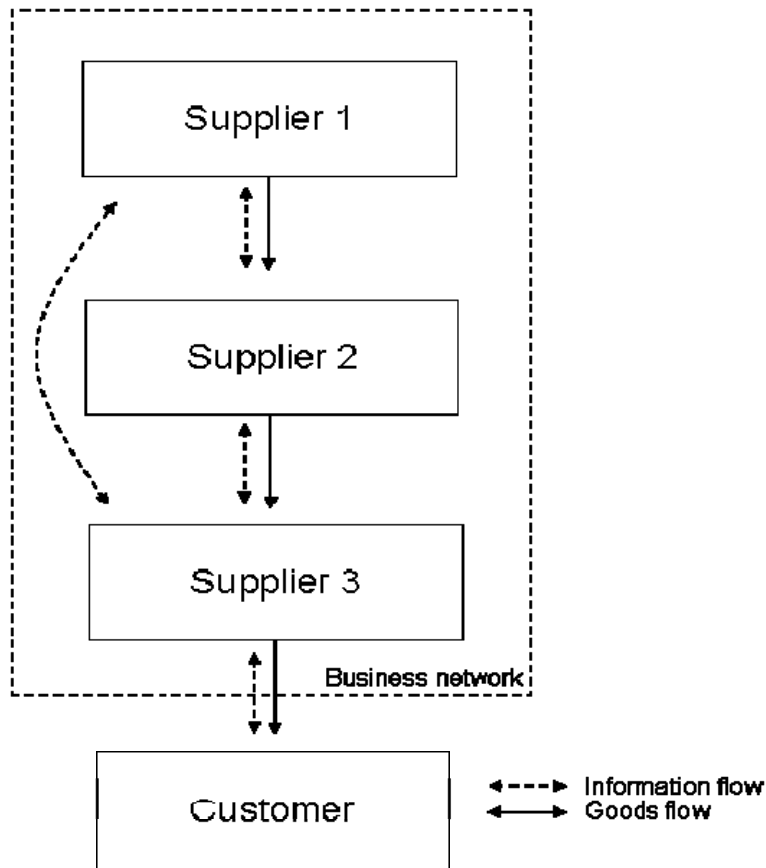


Figure 6: Business network operating as a supply chain, where the customer value is jointly optimised

The ideology of business network operating this way is to consider other value/supply chains as the competitors leading into targeting long stable relationships instead of tendering the supplier in each step along the value chain. Each member can reduce transaction cost at the company border due savings in time and cost related to negotiations. Further as each business network member has greater customer demand visibility, it enables them to reduce storage as well as slack through-out the supply chain that enables increased responsiveness and efficiency. This is very important in adapting to market changes – in a way the business network operating as a supply chain provides its members a degree of protection against market fluctuation compared to common supply chain with limited and most of all slow feed back from the customer interface. On the other hand very trimmed supply chain is more vulnerable to internal disturbances than a supply chain with buffers, but also then the

information of the event is quickly available throughout the chain enabling immediate corrective actions.

The true challenge is the ability to share cost of business network optimisation as well as the gained benefits. Should one fail with this then it causes easily dissatisfaction that leads further to focusing away from common good. Again the freely and immediately available information helps the situation as it lowers mistrust discussed in agency theory.

Compared to a traditional dyadic supply chain this business network excels especially with the amount of ties within the network. The generic challenge for a chain type of operations is that the customer interface is managed only by the last supplier in the chain, but unlike in dyadic – traditional – supply chains the customer information is freely available at the same time for each level.

Usability in software business

This type of model can be imagined for instance to the mobile phone operating system platforms or ecosystems. Nokia Symbian is competing against Apple's iPhone and Google's Android. Each value chain tries to provide unbeatable value to the end-user – the consumer. In this race vital feedback is gathered from the customers largely by their buying behaviour and comments via the application stores. This gives signals to application developers to address what the customers want to do as well as it provides further information to the operating system development to enable more and better underlying functions for the application developers' use.

Nokia was pretty much the first one to create such business network – ecosystem - with the predecessor of Ovi application store for Symbian devices. Even the mobile phone operating system Symbian as well as the user interface (Series 60 etc.) was available for other vendors to use. For many years this network enjoyed clear market leadership with substantial marginal throughout the chain. However, it didn't respond to the customer desires with the pace it should have. The application store was difficult to use, the operating system (or devices) did not support touch screens and the application creation appeared to be also cumbersome enabling Apple and Google to introduce competing value chains. Interestingly though Apple's value chain looks actually very much like the principal lead network as business transactions are

controlled by Apple, whereas Google's Android platform and the application store are more diverse.

Considering application service providing this type of model could be for instance that the party closest to the customer is the channel sales with local tailoring or parameterisation responsibility, the previous step could be the Application Service Provider that makes sure the application service is available, runs smoothly and will further develop and the party behind that is the actual development organisation responding to the new customer needs provided by the channel sales.

3.2.3 Network generating composed offering under "co-support model"

"Business network specialising to contribute to others' customer offering" strategic focus is on maximising the customer offering beyond single company capabilities. In the business network all parties form their customer offering based on their and partners contributions. This enables customers to have greater choice and each company wider customer access for their contributions. At the same time each business network member can better focus on their special competence and interest areas and reduce the level of required capital in creating the customer offering. This is illustrated in Figure 7

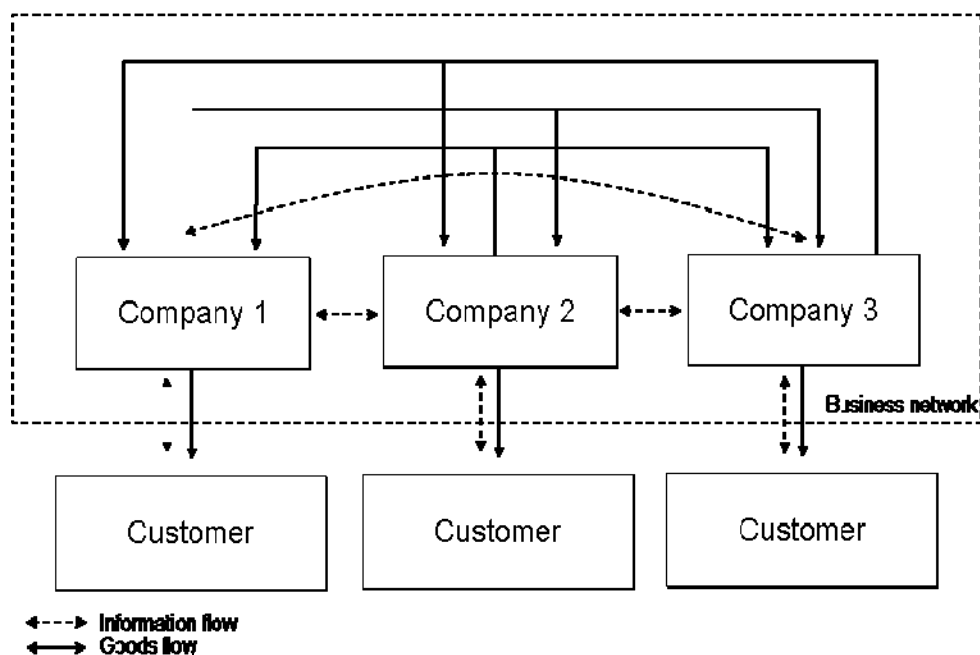


Figure 7: Business network specialising to contribute to others' customer offering

Companies that manage to establish transparent information flow on customer demand as well as some degree of mutual co-ordination guiding who responds to which type of needs - from a customers' point of view - can really provide much wider service offering than any single company in the business network could create alone. However, unless this is very well managed the required integration effort may consume the benefits over self-made sub-elements.

A literature example of this kind of approach is the case of Technical and Computer Graphics (TCG) and the related multifirm spherical network advocated by Miles and Snow (1995).

An interesting question is whether the business network should operate under a single brand. By doing so the network creates additional awareness, but also increases interdependency on performance in the customer interface as in this case the business network image rises and falls together. In case each company uses their own trading brands then extending the business network on need bases is relatively straightforward, also exit from the business network is simpler – only the existing customer responsibilities in terms of maintenance etc. need to be looked after.

As the companies can be operating on the same markets then mechanisms to identify and assign ownership of a specific customer to one of the participating companies need to be established in order to avoid customers making business network members play against each other. It is also important to build elements to encourage refraining from capturing market share from other network members.

Unlike the two previous business network setups here each member has fundamentally all functions of a traditional firm i.e. sales and marketing, development, delivery etc. Thus functional specialisation is not achieved. Instead, there is much wider customer interface and with that greater flux of market understanding into the business network - the amount of external weak ties enables the business network to become aware of required changes earlier as well as deliver its own message broader. Of course nothing prevents development departments in each network member company from specialising into some parts of the final offering within the function.

In terms of revenue creation a business network using this business logic is more redundant than the previous ones. The customer access by multiple entities enables one high performer to compensate for a lower performer. Should the competencies in

the participating companies be similar then also failures or bottle necks in some particular development or delivery areas can be overcome easier than in the case of very high functional specialisation. However, following the core competence thinking of Hamel it is likely that this type of low specialisation prevents the network from achieving something truly leading edge.

Usability in software business

In software business this type of partnerships can be easily established when the software products support commonly defined interface technologies for information exchange. As an example one could take software for managing inventory and logistics, accounting software for managing sales and financial transactions and say a web-shop providing customers an ability to buy the products. All of these complement each other enabling each company to have a wider and more comprehensive product or solution portfolio.

For self-employed software business professionals this type of co-operative approach is rather natural. One might be a professional on servers, other one on connections and third one on some applications. Together they can all respond to their customers needs maintaining their own importance in the customer relationship.

3.2.4 Network for sharing development to address separate segments

The essence of strategic choice in this specific case of Business network specialising to contribute to other's customer offering is the recognition that many times in separate customer segments significant parts of the product or service offering are in fact identical although the appearance may be different. In order to share the load of common "platform" development it makes sense to form a co-operative business network with a player doing logically same things, but operating in different customer segment (or geographical territory for the matter). If Common Product Management function is established then the companies formally define the future development each party contributes to the common part of the customer offering. This is presented in the Figure 8.

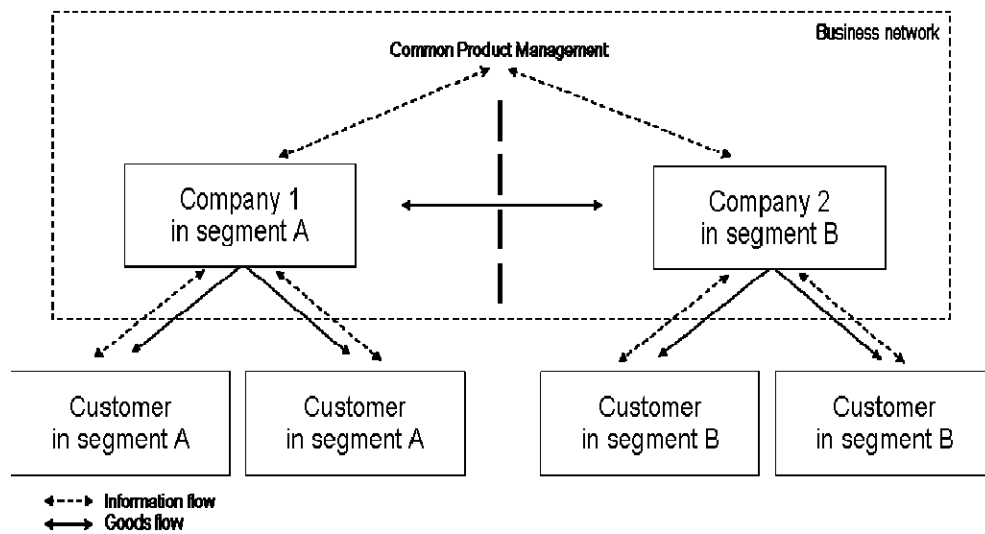


Figure 8: A specific case of "Business network specialising to contribute to others' customer offering", where companies differ by operating in different customers segments

As part of the co-operation in the business network the parties decide not to enter each other's segments, but instead harvest mutual business benefits by building deep and close customer intimacy in the chosen segment. In this way business network can cover multiple segments with thorough understanding as well as sufficient management focus. Maybe the easiness of entering in to other ones territory is one of the reasons, why Todeva and Knoke (2005) indicate that alliances (networks in this context) have lower probability of surviving than co-operation of substantially different companies.

Naturally the further the segments are from each other the smaller the common ground for mutually beneficial development is, leaving greater parts of the customer offering to be carried alone by the company responsible for the segment. In this case a company might benefit of belonging into several co-operational business networks for different parts of its offering.

Usability in software business

For instance software algorithms for video imaging are usable in many segments, but the value add comes from applications to meeting the specific segment needs. Joint development of the video processing platform serves all segments enabling more resources for segment specific customer intimacy lead adjustment.

Examples of segments where joint development can serve multiple purposes are for instance military or space and civil markets. For decades a lot of research has been funded to serve firstly military purposes delivering also applications for civil markets such as positioning and map technologies. Now, in some cases the world has turned upside down as most advanced game engines are being adopted into the military virtual awareness systems. Another example is simply adapting business-to-business solutions to consumers and vice versa. Software technologies related to visual representation, security, storage, databases and many more are fields where the customers' requirements are to large extent similar enabling common ground, but not exactly identical demanding considerable focus on delivering a successful end product.

3.2.5 Network operating with dual business logic

Dual business logic is developed for situations in software business where differentiation of network members takes place on the business logic level. In this study the most relevant case is the network harvesting results out of project oriented creation to both product and service provider business using "dual business logic on operational mode" model with Common Product Management.

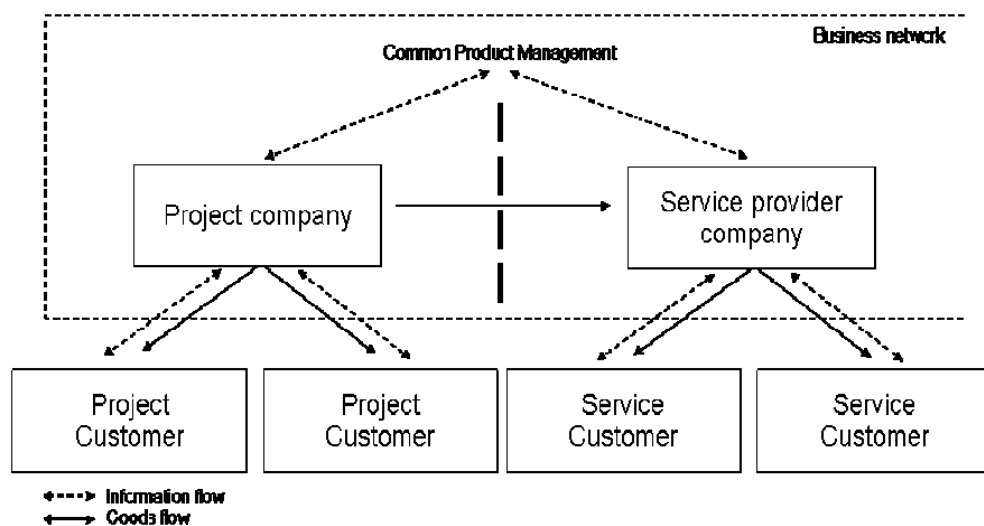


Figure 9: Business network operating on different business logics for different customers

In this case the "dual business logic on operational mode" model business network is formed out of a company creating customer value via projects and another company

that's earnings logic is based on offering services or service products. The project company seeks to tailor an answer to the customer needs and fundamentally sell work. Whereas the service provider company aims to sell as wide, but common service product portfolio to as many customers as possible without need for modifications. The project company collects revenues per project whereas the service provider company revenue is based on use of the services in service fees over time.

In this model the primary benefit targeted via the business network is to mutually increase earned revenue for contributed development hour. The dilemma for a pure project company is that once the project is over and paid, the work done does not generate further income. On the other hand the Service provider company gets steady revenue over long period of time, but creation of a new service generally needs to be at least largely financed before it is taken into use i.e. that is capital intensive. Now, if the results of the projects the project company implements have a good fit to the service provider company product portfolio needs then it makes sense for both companies to agree that against some kind of license fee the service provider company can offer relevant project outcomes as an extended service to its customers. For the project company this means that they can still harvest income after the project is over and for the service company it means that they can expand the scope of available services and with that increase the service income without having to spend large amounts of capital upfront as the project customer has already covered the initial capital required for the work to be done.

By having Common Product Management function the project company gains understanding of the service customers' desires enabling it to seek for projects that are likely to generate outcomes that can be either directly or with slight modifications taken into use as service products. In this sense the service creation roadmap cannot be accurate or precise, but more like a wish list or a vision. If the co-operation works well the service provider company can further reduce its cost by having merely staff for keeping the services up and running, whilst all new service development as well as the more demanding maintenance of the existing ones can be located at the project company. However, this increases the service company dependence on the project company resulting vulnerability to disturbances on the market place or in the inter-company relationships. After all, once the service company has placed the development functions solely to the project company's side its further service offering is dependent on the project company interest, whereas the project company interest is dictated rather directly by the amount of additional revenue generated.

By the creation of the common product management a formalised communication bridge between the product and service companies is formed in order to drive the information exchange between entities. This is a contribution to structural part of social capital and quite needed as otherwise it is unlikely that the information exchange would take place efficiently. This is due for instance to the different time perspectives. The project company naturally thinks and plans in projects i.e. more short term, whereas the service provider company tries to focus on continuity of the service.

In general this dual business logic setup could be considered as a hybrid model of the previous ones. It allows and encourages to a certain degree functional specialisation whilst catering also for wide customer access and information flow. The business logic could also be characterised as opportunistic as the project company is expected to take on mutually beneficial projects always when possible – other times any profitable projects will do. This means that the service provider company may or may not get service extensions through this route. For the service company this type business network can be very efficient way of advancing its business and for the project company a lucrative way to increase earnings, but it cannot be the lifeline for either one.

At least in theory this would make a lot of sense. More and more software is being offered as application service, whereas still many need to buy specific software projects to have their needs covered. Creation of software is in any case typically a software project.

Comparing this model more closely with the theories interesting issues are revealed. In the next paragraphs the model is being viewed in the light of the theories presented in the Chapter 2.

Resource Based view (Wernerfelt, 1984) with its extensions of Dynamic Capability view (Teese et al 1997; Eisenhardt and Martin 2000), the focus on core competencies (Prahalad and Hamel, 1990) and the Relational view (Yli-Renko et al, 2001) call for optimising the firm's resource position. Executing the "dual business logic on operational mode" model to the maximum then the competencies are very well focused. The project company runs the development activities in project mode, its sales is focused on selling projects, whereas the service product provider focuses on

selling service and ensuring the service availability at all times. The project company can operate in very dynamic way in a very dynamic – short term – environment in contrast to the service provider that looks forward to be a more business as usual partner for the customers. Thus from the network point of view the resource specialisation and focus can be rather high with an inbuilt dynamic and stabilising component.

From the Transaction Cost Economics (Williamson., 1975; 2008) point of view the core contract is the network internal contract between the project and service provider company. In terms of asset specificity service provider is dependent on the project company, but not the other way around due to development competencies located there. When the volume of service provider business forms a significant part of the project company income then partial dependency relation is likely to be formed as in such case the project company can take higher projects risks as it can count of a more steady income flow from the service provider's license fee contributions. Then the mutual interest of ensuring the long term sustainability for the business relation is given. This corresponds to the Williamson statement that high frequency has positive impact on the relation. Furthermore, then the Common Product Management function also operates on higher frequency optimising the networking processes and providing in comparison lower price. The contracting style needs to be either benign or credible depending on the style parties prefer although until the service fee provision from the service provider to the project company is substantial then the situation dependency wise is closer to disequilibrium.

Moving from the traditional economic theories forward to social capital and network the dual business logic model show itself as a platform for strong ties in different levels between the project and service provider companies – especially in the Common Product Management function. The information conveyed from the service provider or project company customers comes to the other party probably more via weak ties (Granovetter 1983). This is important as it constantly provides new ideas and views challenging the used pattern. In terms of Social Capital (Nahapiet and Ghoshal, 1998) the key is obviously the relation between managements of the Project and Service Provider companies. The next one is the question on Social Capital between those that are responsible for the Common Product Management – are they operating like a high performance team or not as a team at all? (Erwee, 2001). Here the issues revealed by the agency theory (Eisenhardt, 1989) become also relevant. Are the parties performing as expected, are they sharing information openly and most of

all are they driving toward common goals or quite the opposite? In the dual business logic model the risk of a party – especially the project company – working towards mutually non-optimised targets is high at least until the steady revenue coming from the service provider makes considering mutual interest an economic necessity.

The Industrial Network and Interaction approach studies the fundamental network elements – actors, resources and activities (Rajala and Westerlund, 2009). The most decisive actor in this model is the one in power in the project company as that person fundamentally has the final say in which projects and in which way the development resources are used. For the network the most relevant activities are flows of products to service provider and demand related information back. Clearly the performance in the development as well as in both project and service product sales are crucial for business success, but the mechanisms to establish and maintain the exchanges are in the core. This leads to question of Network governance (Jones et al. 1997). How can the Network governance be arranged for this model? The structure for the governance in the model is rather straight forward as well as the share of responsibility. In this sense the model enables easy arrangement, but like already mentioned couple times if the economic benefit provided by the service provider is not significant the network is not a network of equals increasing risk for the service provider. Therefore the network is likely to evolve significantly in many ways during its development (Batonda, 2005).

The traditional dilemmas of network dynamic (Erwee, 2001) the model addresses partly. As long as the parties are pure project company and a pure service (product) provider there is not much or any competition between, the interdependency is more of an issue to the service provider, but if it considers the network as an opportunistic benefit and does not place all the development competence to project company side then even that is not significant. On the other hand when service provider generates significant and steady base income to the project company then the interdependency is mutual. Due to the potentially low interdependency on project company's behalf the model does not optimally support co-operation and trust. Having said that the service company cannot directly harm the project company and vice versa the damage is limited to the lack of new services resulting that the required level of trust is much less than for instance in the principal lead network or in the optimised supply chain.

Finally using Shafer et al (2005) business model components the dual business logic on operational mode as a business model enables to pursue two different types of customers with full focus. It enables multiple pricing mechanisms as well as provides

competitive advantage over companies operating alone as a project company or service provider, because here the service provider has access to new service products with low capital investment and the project company gains additional income still after the project is over. The offering the network can provide can over time become extensive as every new project in the best case expands the service product offering. Branding should follow the business logic and reflect the customer promise. In the centre of the mission for the project company is to maintain very high competence and performance in project management and – in this case – software development to be able to competitively respond to versatile customer project requirements over time. In turn an important element of the service provider mission is to maintain the customer loyalty and constantly increase/optimize the share of wallet by providing high value services. In this sense the dual business logic is rich in strategic choices. The logic for value creation and capturing value as well as for value network is straight forward.

3.2.6 Model comparison

Common expectations for all business network setups is that the network members are able to identify common and individual business benefit and thus commit to the business network from the economical side. The same applies also for the mental side – for any of these models to work at all the commitment and genuine desire to work together for common good with other members on the mental side needs to be in place. The co-operation needs to provide personal benefits.

Further, no business network can be competitive on open market, if it does not possess the required competencies, skills, processes and many more. In this sense all the models need to overcome for instance the agency problem in a way or another.

The business network setups presented here are obviously severe simplifications. In the real world the potential variations within a model as well as between the models are uncountable. A brief comparison between the models is in the Table 8.

Table 8: Business network type comparison

Business network	Core benefits	Challenges	Adaptation
Operation under principal	<ul style="list-style-type: none"> • Reduced overhead by functional specialisation • Integrated driver to perform 	<ul style="list-style-type: none"> • Only one external interface • Labile in case a member lacks performance 	<ul style="list-style-type: none"> • Once need is identified a good chance to react due to full mesh internal communication
Optimised supply chain	<ul style="list-style-type: none"> • Visibility throughout the chain enabled quick adaptation 	<ul style="list-style-type: none"> • Optimisation cost and gain sharing • Only one external interface 	<ul style="list-style-type: none"> • Designed to optimise adaptation capability
Co-support	<ul style="list-style-type: none"> • Wider customer access with lower capital per member 	<ul style="list-style-type: none"> • Potential competition of same customers • No functional specialisation 	<ul style="list-style-type: none"> • In-built redundancy and many external weak ties
Dual business logic	<ul style="list-style-type: none"> • Higher value add for the same work 	<ul style="list-style-type: none"> • The relationship is unbalanced • Diversified primary goals 	<ul style="list-style-type: none"> • An opportunistic scheme • Very flexible, but volatile

The models differ from each other on the emphasis in harvesting economic benefit. The Operation under principle seeks for savings in the workforce whereas Optimised supply chain focuses on gaining advantage via quick reaction capability and with that minimised storage – although in software business physical storage is seldom a problem. Co-support looks forward to increase customer penetration and volume beyond capabilities of a single party and Dual business logic tries to recapture value from already done work.

Common for all network models is that they all have challenges to withstand disturbances. However, there are major differences also in relation to this aspect. Optimised supply chain is designed to adapt to external disturbances, whereas for the co-support an internal failure by one party has probably the least devastating consequences as all network members have access to their own clientele and the product portfolio is composed of multiple offerings. A tuned Principal lead network does not have overlapping functions or protection against non-performance in the customer interface. In that sense it relies strongly on high level of performance by all network members. However, the most volatile is the Dual business logic as the

generation of new services for the service provider can not be the first priority for the product company as long as the main source of revenue comes from the product business.

Without thorough empirical study it is unclear under which circumstances these networks can operate more efficiently than a hierarchical single company. Nevertheless, the expectation is that business networks operating under these models are more focused and have greater driver to maintain high performance than a single hierarchical company. On the other hand a hierarchical company can utilise coercive power and control in conflicts, whereas a business network of equals' may end up to suboptimum compromises. Likewise a business network of non-equals may be driven to benefit one than others (Williamson, 2008).

In this case study the Dual business logic model is proposed for the Application Service Provider (ASP) - IT Project company business network. The fundamental reasons for this is the believe that a hierarchical company consisting of both an ASP and an IT project company the managerial focus would not serve both businesses equally, but one or other would lack on it leading to inferior business results. The other main reason is that the chosen model requires very little additional capital i.e. it is well suitable for capital poor companies that prefer to be flexible on feature or service content versus driving a specific service portfolio at a certain time. In other words this is probably not relevant for companies that look forward to be leading edge and shape the market. Third reason is that the business model using dual business logic should enable companies that wish to focus and grow in either It-project or in Application Service Providing to be able to find a business network model that offers processes via the common product management function to harvest increased revenue, value add and efficiency.

4 Methodology and data

4.1 Methodology and methods

Key ideological approach to this study is critical realism i.e. reality is concept-dependent, not concept-determined (Easton, 2002). In business networks research constructionist and relativist philosophy of science has been widely used (Westerlund 2009) as it has emphasis on subjectivity and situation-specificity i.e. the interpretations are influenced by researcher's analytical and theoretical frameworks and the context of the research (Westerlund, 2009)

Ontology is the study of what kind of things exists. Ontological view of critical realism divides social reality in three domains: the empirical, the actual and the real (Easton, 2002)

- Empirical: experiences and events through observations
- Actual: events regardless of observation
- Real: processes, structures, powers and causal mechanisms that generate events

Social reality is viewed as a socially constructed world and the aim is to explain observable phenomena with reference to underlying structures and mechanisms (Easton 2002).

In constructivist perspective subjective interpretations to qualitative research are applied thus information acquired in the research should be regarded as context specific and socially constructed (Tikkanen, 1996)

Qualitative research based on case study

According to Creswell (1998) a case study is an exploration of a system bounded by time and place or a case over time through detailed, in-depth data collection involving multiple sources of information. Thus the purpose of a case study is to acquire understanding of the nature, significance and functioning of cases and then report it (thoroughly, carefully, credibly ...) to the scientific community (Westerlund, 2009).

Yin (2009) provides a two-fold technical definition of a case study

1. A case study is an empirical inquiry that

- investigates a contemporary phenomenon in depth and within its real-life context, especially when
- the boundaries between phenomenon and context are not clearly evident

2. The case study inquiry

- copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result
- relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result
- benefits from the prior development of theoretical propositions to guide data collection and analysis

According to Westerlund (2009) case studies are applicable for the research on networks due to their ability to capture the dynamics of the phenomena and to provide multisided view of the object of study in its specific context. Further, case study research may produce comprehensive, holistic and pragmatic descriptions of complex networks that have unique features and are context-specific.

The finest case studies are exploratory, descriptive or explanatory (Yin, 2009). Yin recommends exploratory case study method as a prelude to additional research. It is good for studying complex and novel phenomena, such as business models, where strict pre-set theory and hypothesis cannot be used (Westerlund, 2009).

It is worth noticing though that case studies are not as such for generalisation – especially, if the amount of comparable cases is low as in this single business network study. Nevertheless, they may provide very valuable insight to the phenomena and thus contribute to the more general theoretical propositions.

According to Halinen and Törnroos (2005) despite of the usually greater explanatory power of multiple-case studies they may in fact dilute it, if the case descriptions are superficial, compared to a single case study. This thinking is seconded by Dyer and Wilkins (1991) in their statement that in-depth study of a single case contributes to content and the study of multiple cases contributes to context.

In study of networks normally only the design of a network at certain time can be captured as networks fundamentally change over time i.e. it has been different before and it will be different in the future. Likewise this applies to business models as a business is naturally linked with the business surrounding. In this particular case exceptionally the entire life time of a business network formation could be observed. Although the interviews were done first after the network failure the author had a chance to observe the events from the beginning.

Validity and reliability

Validity and reliability are the scientific qualities of the research. In the scientific community there is plenty of discussion of the validity and reliability of the qualitative research.

Mäkinen (2005) defines validity as the measurement ability of an indicator or a research method to measure what one is measuring. According to Westerlund (2009) Cook and Cambell (1979) defines validity as the best available approximation of the truth. Further, according to Richardson (2000) as described by Westerlund (2009) validity reflects externalities in a multitude of ways depending on the perspective. In other words a qualitative case study is a process of discovery depending on the researcher's point of view. Therefore there is not absolute validity in the research. Following the constructionist view all knowledge acquired, processed, and generated is dependent on the involved parties in the research process and in knowledge creation.

In qualitative research one should use grounded and established concept from prior literature when ever possible and look for any support in literature other times.

Yin (2009) categories validity into three levels

- Construct validity: Identifying correct operational measures
- Internal validity: seeking to establish a causal relationship
- External validity: defining the domain of findings generalisation

In this study the validity - the "truth" - is empirical information based on five interviews of persons that have been involved in creation of business network in question. Three of the persons were owners in their respective companies, controlled

resources and possessed power to decide directly the flow of the events. The two others followed and influenced the formation of the case business network closely. Thus these are the best data sources to study a lifetime of an attempt to form a business network. The flow of events were independently recorded and compared as well as evidence on issues impacting main variables were collected. These provide proof of the causality contributing to internal validity. Considering the external validity the results can be generalized to requirements for a networked business to operate.

Reliability evaluates the possibility of replicating the study and obtaining the same results. For the reliability of the theoretical framework theory triangulation of multiple theories and previous frameworks has been used. Considering the reliability of the empirical material the interviews were conducted using the same semi-structured theme interview framework. Each interviewee was given the time they desired to have and all interviews were recorded and transcribed. Another researcher should be in a position to find the same outcomes from the case material. Based on the same theoretical framework, the same main variable analysis and the same theme interview framework one is likely to get comparable results from another case business network.

4.2 Selection of focal points – what is being evaluated

The primary aspects to be observed in the case study are

- Targeted business network model and its setup
 - What kind of business different parties were looking forward to?
 - Evaluation of the targeted business based on Shafer 's business model
- Social capital between actors
 - Structural embeddedness
 - Cognitive dimension
 - Relational embeddedness
- Stage on business network by Batonda
 - Evaluation which stages have been reached and why

By using these three primary aspects as focal points one is likely to gather a rather comprehensive view on the feasibility of the business network and understanding why to outcome was not successful.

The business model contributes to the reason, the social capital to the ability of involved persons to co-operate and the Batonda's stages model highlights the dynamism in relation to time.

4.3 Gathering of the data

The data was gathered most of all by theme interviews. Altogether five interviews each lasting from some what more than half an hour to close to two hours. The author has also been monitoring closely the development of one of the case companies since late 80ties.

Three of the interviewed persons were the main owners of their perspective companies at the time and the two others were persons closely involved in the activities.

The interviews were made granting anonymity to the persons and companies to maintain business confidentiality on one side and to encourage honesty and openness. The interviews were semi-structured: the interview framework was readily created, but the interviewees were encouraged to describe and share their views and thoughts openly.

The interview themes were chosen to support the main variables derived from the theoretical framework. This is presented in the Figure 10.

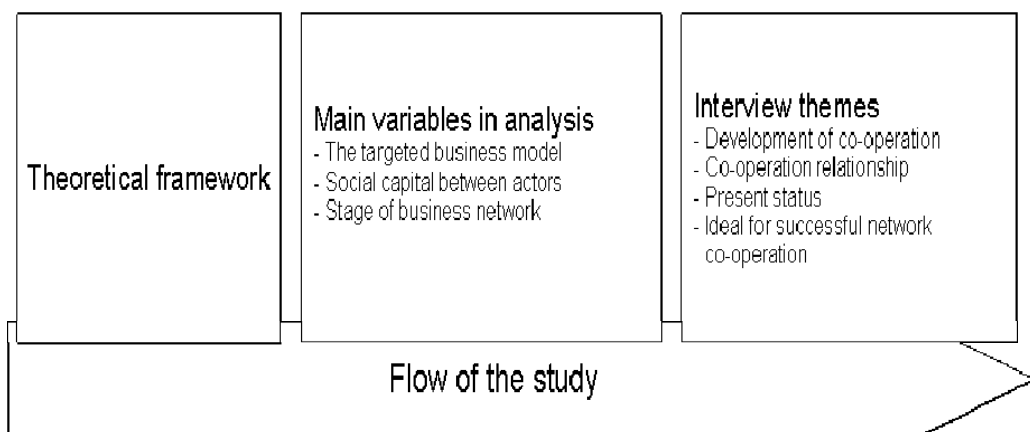


Figure 10: Formation of the interview themes

The interviews were recorded and later transcribed to enable easier analysis. Once the study is finalised the interview material will be discarded.

The interviewed persons are coded as follows

- ASP-owner the owner CEO of the Application Service Provider company
- ASP-admin the administrative manager in the Application Service Provider company
- PRO-owner the owner of the Project company
- NPR-owner the main share holder of the New Project company and before that the CEO owner of Subcontractor company
- NPR-ceo the current CEO of the New Project company – he acted also as a consultant in creation of New Project company between PRO-Owner and NPR-owner.

These five persons were selected for interviews for their position, visibility and influence to the inter-company relationship as well as for their personal qualities.

The theme interview framework is enclosed as the appendix 1 together with the list of interviews in appendix 2.

5 Empirical results

5.1 Introduction to case – an attempt to build a software business network

The case forms itself around two companies that seek to establish a common business network. Both companies readily operated using significantly external resources. During the observation period the structure of one of the companies and its personnel changed resulting in practically a new company.

The four focal companies can be characterised as follows

- A company focusing in providing application service primarily to various non-profit organisations. In this study from now on this company will be called as the "Application Service Provider" (ASP) company
- A company focusing in delivering tailored software projects and IT management support most of all to small- and medium size enterprises. In this study from now on this company is called the "Project" company.
- A third company that took over the business from the project company during the case is also a software project company with more software coders, which was the reason why it served earlier as a sub-contracting partner to the Project company thus it is called the "Sub-contracting" company.
- Newly established company consisting of the Project and the Sub-contracting companies businesses is called the "New project" company.

Application Service Provider company background

The company was first found as a limited partnership firm in the early seventies to accommodate the owners various sales activities on the side of his daily job. In the late 80ies just when Finland was entering severe depression the owner (ASP-owner) decided to become fulltime entrepreneur. In this conjunction the legal form was changed to limited company.

The main business at the time was to sell and deliver office computer networks and other office electronics such as copy- and fax machines. With the introduction of Lotus Notes the company moved gradually to deliver application software projects. In this business the company managed to attract several large scale industrial customers despite of its size of less than ten persons.

With the introduction of internet and World Wide Web to larger use the company became a pioneer by starting to offer Customer Relationship Management (CRM) applications as a service over the internet. The vision was correct, but in the timing company was about ten years too early. The company has had also other visionary concepts. One of them from the very beginning was to build an extensive network of contacts and use those professionals to complement and many times replace the in-house resources. Another visionary decision was to move to use Open Source code software technologies removing the risk of sudden software licence changes.

Characteristic for the company has been enormous focus on business continuity. In praxis this has translated to very high avoidance of fixed cost and risks in general. Thus the company has never grown from a handful of persons despite of some rather lucrative possibilities. On the other hand it has managed to survive despite of the depression, too early market entry, the burst of IT-bubble and so on.

Project company background

Project company was established for IT management consulting as a result of its owners (PRO-owner) competition prohibition limitation in number of other fields in IT from his previous engagements as an entrepreneur. 5-6 other persons that had become individual actors one by one approached him with their skills and they jointly decided to start offering their competencies most of all to the small and medium sized enterprise market via the project company framework. Soon other companies were used as sub-contractors to provide special expertise as well as mere software coding power.

Initial intentions for co-operation

The owner of the ASP (ASP-owner) had long been looking forward to focus on marketing, selling and simply providing the application service. His desire was to have

the maintenance and development of the application itself taken care by a trusted partner as it was difficult to maintain sufficient development competence as well as staff with the relatively modest development workload the business generated. This reflects well the essence of Resource Based View (RBV) in optimising firm's resource position (Wernerfelt, 1984)

The owner of the Project company (PRO-owner) in turn felt to be the bottleneck of the company income as he was the person to sell the work effort of all others in addition to all administrative tasks. He also wanted to be more involved in the projects themselves.

In this sense both felt that they have found a good complementing match with each other. The PRO-owner believed that ASP would take care of selling and the ASP-owner believed that the project company would take care of the development activities. In this way both were fulfilling Stevenson's (1985) definition of entrepreneurship by exploiting resources beyond own control. This has been illustrated in the Figure 11.

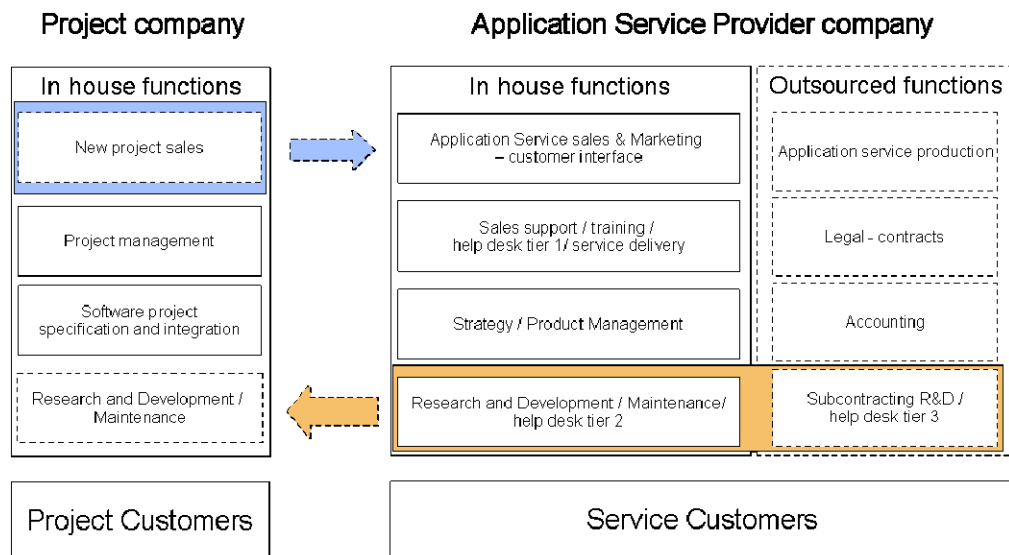


Figure 11: Initial business desires of ASP and Project companies

An important point here to note is that the need was problem originated instead of stemming from a common grand vision, which according to Ahlström-Söderling (2003) predict lower success probability. Nevertheless, the strategic level goal for establishing a business network was in place (Erwee, 2001).

The evolution of the relationship

The owners met for the first time in the last quarter of 2009. The meeting was setup by a recently hired sales person of the ASP as he had during his previous career been in business contact with PRO-owner. The ASP company was remotely known to the PRO-owner as it has been in the business already for quite some time – also the PRO-owner's previous employer was known as a company to the ASP-owner. So, there was some level of idea of mutual professional competence providing perceived bases for Social Capital layers of Structural Embeddedness in terms of connection as well as in Cognitive Dimension in terms of common language in the IT-sector. But maybe the even greater reason to take the time to look at co-operation possibilities came from the understanding that both shared the same active approach to common religious faith reflecting a characteristic of the Relational dimension in Social Capital (Nahapiet and Ghoshal, 1998). The relationship at this point pretty much fulfils the Stage 1 of Batonda's (1995) Network development stage model. This and the other turning points are presented in the Figure 12.

The talks to establish co-operation commenced with the expectation by PRO-owner to enter in to serious revenue creation within couple of months. He also felt the match of the two companies to be so good that he proposed a merger as the primary discussion track by doing so he immediately targeted the relationship to meet the Stage 4 criteria by Batonda (1995) by integrating operations and strategies. The ASP-owner rejected the proposal and instead flagged for a comprehensive frame agreement to regulate co-operation with the notion that one could return to merger talks if the co-operation would start bearing fruit. Here PRO-owner and ASP-owner had most of all different interpretations of business risk. ASP-owner expected the degree of risk in transactions to decrease in time, information and experience (Ring and Van de Ven, 1992).

The parties discussed numerous times during the winter 2010. In Spring the PRO-owner began losing faith in the co-operation with the ASP due to slow progress. Clearly PRO-owner was looking more for a relational contract (Ring and Van de Ven, 1992), whereas ASP-owner wanted to have contractual safeguards (Poppo and Zenger, 2002). Yet PRO-owner did not stop the talks despite of time being consumed as the idea was still good. However, he began in parallel merger discussion with the Sub-contractor company. Around the same time Project company was planning to

move to new premises and offered ASP also a possibility to move to the same location. After a long consideration – from the Project company perspective – the ASP agreed to move, which took place in early summer 2010.

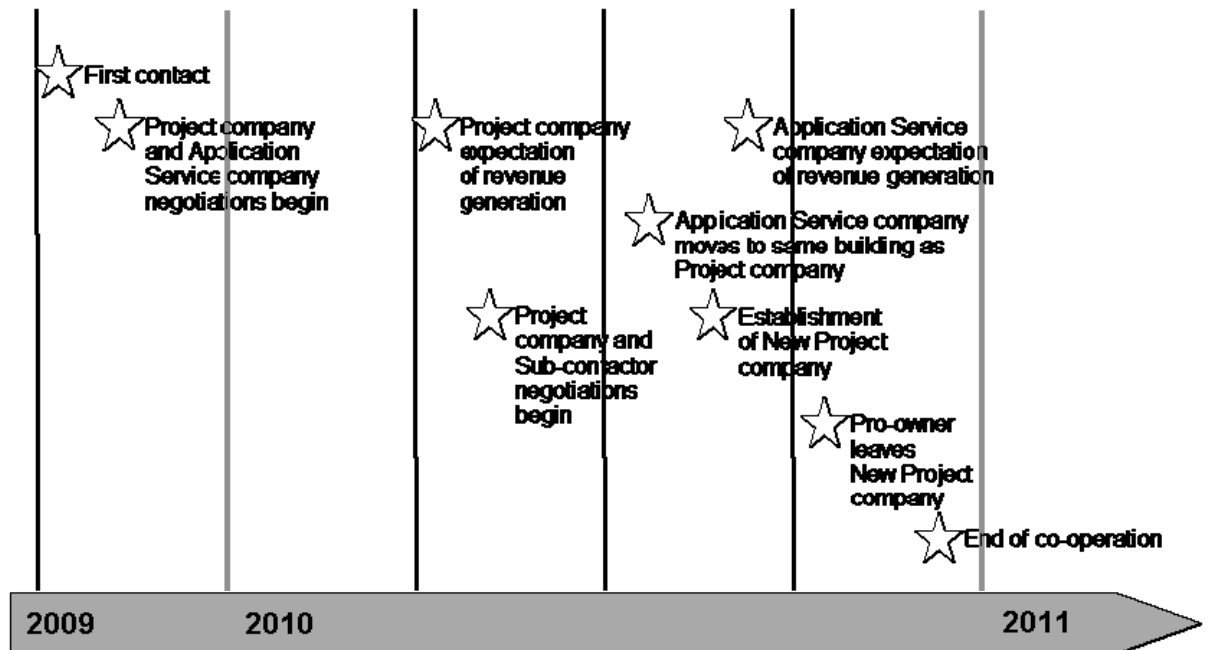


Figure 12: Main turning points during ASP and Project company relation

Talks continued in the new premises. ASP-owner pushed forward to have a comprehensive contract in place prior to business activities and the PRO-owner considered that without significant sales or prospects there was no need for complicated contracts thus despite of good will and plenty of meetings there was not much progress. In other words the owners were looking for contradicting governance forms (Poppo and Zenger, 2002) without even realising it. This is an indication that despite both being in IT-sector nevertheless when it came to discussing co-operation forms their communication did not meet each other i.e. a lack in the Cognitive dimension in Social capital (Nahapiet and Ghoshal, 1998). According Batonda (1995) the situation can be described as lack of competence in Relationship development processes related to the Stage 3 in the Network Development model.

Then the Project company business was acquired by the Sub-contractor company forming the "New project" company, where the PRO-owner became a minority share holder. This made ASP-owner a little bit worried about the development, but considered it more as an opportunity, especially as the PRO-owner presented it in that

way. The continuous trust to PRO-owner by ASP-owner indicated from his part high commitment and strong Relational Dimension component of Social Capital (Nahapiet and Ghoshal, 1998). Of course the decision to move to the same premises a little earlier was another indication of the same thing despite of the fact that ASP-owner wanted to have formal contracts in place.

Discussions on co-operation continued, PRO-owner represented the New project company. ASP-owner was very hopeful and believed to be able to start generating revenue for mutual benefit after the summer break in 2010.

However, around that time the major owner of the New project company (NPR-owner) began to question the relevance of the discussions PRO-owner was conducting replacing him in the interface with another person – the NPR-ceo. This along with other issues increased tension between the NPR-owner and PRO-owner to the point that PRO-owner decided to pursue new challenges elsewhere. Now, the knowledge of all the discussions, intentions and desires left the New project company. The ASP-owner and the NPR-owner had not met nor discussed with each other. So, one can say that the Social Capital between companies was pre-empted at the same time when PRO-owner left. The Structural Embeddedness between companies was based on the personal contact between PRO-owner and ASP-owner as well as the Relational Dimension relied on their mutual trust (Nahapiet and Ghoshal, 1998). Then a series of relatively small events took place that escalated due to the lack of direct understanding and mutual-trust between NPR-owner and ASP-owner leading to ending all ties between the companies by fourth quarter of 2010 – approximately a year after the initial discussions. This brought the relationship to Stage 5 i.e. termination in the Batonda (1995) Network development model without ever really reaching the relationship maintenance process i.e. Stage 4.

5.2 Targeted business model and its setup

In this section following topics are addressed

- Targeted business network model and its setup
- What kind of business different parties were looking forward to?
- Evaluation of the targeted business based on Shafer's business model
- Appearance of the business network to the New Project company major share holder

The business goals of the network participants

The initial business desires of the Application Service Provider company owner (ASP-owner) and the owner of the Project company (PRO-owner) were rather clear and straight forward. ASP-owner wanted most of all to find a partner to take care of the software development, whilst at the same time expanding the available service portfolio. PRO-owner was looking for more sales power to be able to focus more on leading the team in the Project company as already described earlier (Figure 11).

The reason for the initial desires was also very clear. ASP company did not have sufficient turn over to support many development resources in terms of work volume or competence maintenance. On the other hand ASP did have two newly recruited sales representatives that were looking forward to offer wider portfolio of services to the customers. Project company in turn took pride of having very high competence in managing software creation efficiently, but had lack of sales power.

The network business model supporting the goals

ASP-owner's idea of the business relationship evolution was to begin with a subcontractor agreement that would serve as the formal bases for a de facto outsourcing partnership of the entire ASP development activities to Project company with common drive to provide as wide and deep services to the ASP customer base as possible. At the same time the Project company would take care of its existing and new project customers maintaining and further developing its competencies as well as components for the service portfolio extensions to be offered via ASP. In other words, this meant establishing essentially a network operating with dual business logic presented in the Chapter 3.

Evaluating the other business models from Chapter 3 the co-operation could not be a network "operating under ASP as the principal" as the Project company had and had to have its direct customers. The model could have been an optimised supply chain, which it in a way initially was to be via the sub-contractor agreement, but not a pure one as the ASP could not produce sufficient volume to replace all the Project company's existing customers. The network generating composed offering using co-support model did not come to question as ASP did not really have much to offer for the Project company's project customers thus it was not viable. In a same way the

model for sharing development to address separate segments was not relevant as the companies differ more in the project – service axis than in the customer segmentation.

Considering superficially the feasibility of the dual business logic it appeared rather sound.

Evaluation of the network business model

Using the Shafer et al. (2005) business model components (See Figure 4) in the following paragraphs the dual business logic model is evaluated for a business network consisting of the ASP and the Project company – later the New Project company.

The main components of Shafer et al. business model consist of Strategic choices, Value network and creation and capturing Value.

The first element of the *Strategic choices* category is the **customer**. The business network in question had a wide array of customers in several segments. Some of the New Project company customers operated also as Application Service Providers, but in different customer segments than ASP thus there should have been more benefits than conflicts of interests.

The **value proposition** in dual business logic enables two separate focuses on different needs of the customers. In this case the (New) Project company focus was on delivering efficiently tailored results to meet the specific business needs of the customers – a diverse selection of IT capabilities with project management skills. The ASP focus was on providing application services very cost efficiently. In praxis this meant fewer solutions that were adapted for more specific segments. Since the focuses were this different then they were probably better managed, when the differences were recognised and regarded.

The skills, **capabilities and competencies** the (New) Project company had, fulfilled more or less the development needs the ASP had in addition to its own capabilities. The New Project company did not require the ASP sales resources in the same way as the Project company did, because the New Project company staffing in general was wider as well as the existing customer base. At least in short term this moved the bottle neck from obtaining new customers to managing larger amount of projects

efficiently. This meant that the New Project company did not have much reason to allocate resources to build co-operation with ASP unless it could show very good sales performance. After all every used minute was away from something else.

Looking at **revenue** and personnel the business network would have been in fair balance between the Project company and ASP company, but in the context of New Product company the total volume generated by ASP had a clear minority share. However, that did not need to be an obstacle. The greater challenge was the agreement of transfer cost of the activities done by the (New) Project company for the ASP company as offering generally in ASP is based on monthly fees whereas in project business one looks forward to invoice all by the end of the project. The situation was not so difficult for ready made components as the ASP generated revenue would have come on top of the project revenue. Then the win-win transfer cost could have been moderate as it would have improved the ASP's competitiveness against its competitors that rely on in-house development. In the same way the (New) Project company would have had more manoeuvring space in pricing its project offering as additional income could have been expected outside the project in question. This would have given an additional advantage over other project oriented competitors.

Strategy wise dual business logic is not very demanding as both businesses can rather freely run their own strategies. In this case as long as the (New) Project company delivered widely solutions that were intended for human beings instead of some pure process automation or embedded systems then a lot of the components and used technologies were useful in some form for ASP customers as well. The difficulty of course was that with the freedom to pursue own strategy and goals the immediate need to consider decisions from the entire network point of view was reduced, increasing volatility and risk of suboptimised decisions – in other words the risk of agency cost was real (Eisenhardt, 1989). In this case especially ASP had to carry substantial risk, but if an ASP was able to have even an opportunistic access to software components clearly under market prices and in particular if this was to be done without capital investment then it could still be very lucrative.

In terms of **branding** it would seem appropriate that both customer bases are approached with the brand familiar to them. In this case the business network itself did not create direct brand value. However, indirect brand value especially for ASP could have been substantial through the extended service product portfolio the network enabled.

In dual business logic the network **differentiation** is poor as it has two separate focuses. In this particular case the differentiation was limited also for (New) Project company as well as ASP company. In the market there were similar companies with similar competencies thus one cannot speak from high uniqueness for either one of the companies. Having said this, the differentiation within the network was significant. However, not as significant as originally expected. Especially the New Project company was able and ready to deliver IT-projects also as hosted services. In other words New Project company was not a pure project company, but to an extent also an application service provider.

Thinking of the business network **mission** one could characterise it was more tuned for survival and maybe for operational efficiency than for instance maximised growth. This was because the service extensions ASP would get were opportunistic – there could be many, but on the other hand, if the (New) Project company projects were unfit then there might be none. An ASP following this kind of dual business logic would need to be very flexible and adaptive in developing its business. A key competence would have to be the ability to translate technical opportunities provided by the (New) Project company from other projects to sellable ASP customer benefits and needs. It would have been an uncertain future, but at the same time a way forward with low expenditure. Although if the New Project company drove a strong growth strategy (as it did) then there should also be every so often projects that would fit well also for ASP needs.

The **value network** component of the Shafer et al. business model focuses on the roles in the network.

The (New) Project company was to act as a **supplier** to ASP and its subcontractors and partners were to be suppliers for the (New) Project company in terms of software service product development. ASP in turn was thought to be a kind of a distribution channel for the outcomes the (New) Project company generated. In addition to these a very important partner for ASP was the IT hosting company that ensured the physical computer servers were up and running properly and accessible through the internet. The product, information and monetary flows are illustrated in Figure 13. As some of the (New) Project company customers did not wish to own their IT hardware let alone keep it in their own premises usage of a common IT hosting partner might have

enabled to achieve better prices for hosting services via higher volume for the entire network.

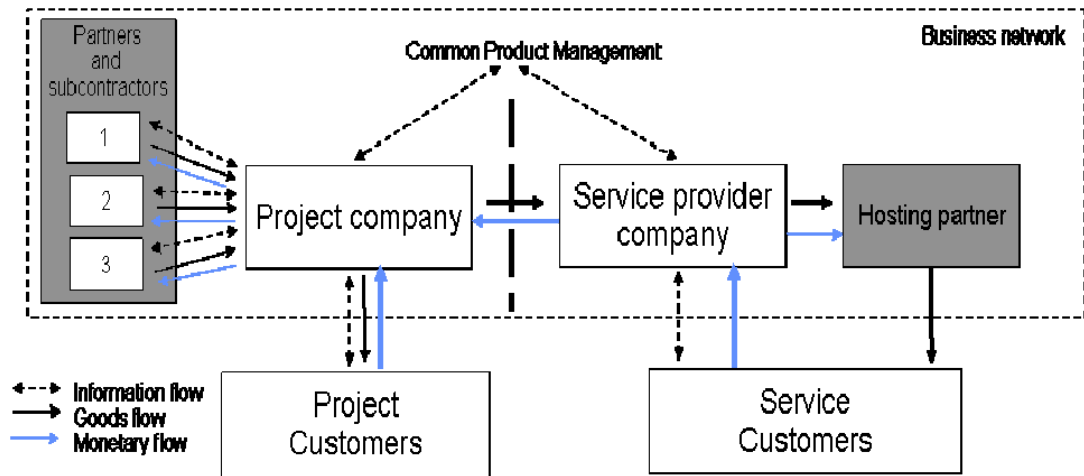


Figure 13: Product, information and monetary flows

The **customer relationship** was primarily to be taken care by each company separately. There was a very clear cut for the (New) Project company customer base - ASP had no connection with them. However, the situation with the ASP customers was to be different. The ASP was responsible for them, but if the second line maintenance was on the responsibility of the (New) Project company then at least the technical staff would have to be in touch with the ASP customers. Moreover, if ASP was to sell service expansions that required specific integration or other development project type of work that was to be done by the (New) Project company. In such cases one needs to be especially clear on the responsibilities and duties in the customer interface i.e. common rules (Virtanen et al., 2005). For instance, there is a need to agree who has the customer ownership.

Closely related topic is the **information flow** – in particular the **customer information**. Now, the key to achieving the benefits the business network can offer is in the efficient communication on the customer needs and desires as well as information sharing on solutions and other potential services that can be obtained. Tsai (2001) describes this as the knowledge transfer process arguing that it contributes to higher innovation and better performance. In the dual business logic model this has been called as the Common Product Management function. Unfortunately in this case how to organise this type of information flow was not really discussed, which probably in its part diluted the visibility how to capture value in praxis.

The **Product/Service flows** in turn were rather self-evident in this type business network flowing from the (New) Project company to ASP.

The other major components **Value creation** and **Value capturing** have been touched in many ways already. The network value creation was to take place in reusing suitable components and knowledge gained in projects. The other part of the value creation was the understanding of customer needs and the process of identifying and adapting suitable software components to meet those needs. The value capturing meant simply the capability to gain additional monthly fees for the reused software components and related services.

Despite of the fact that based on the above evaluation the business network seemed feasible, it did not become reality. The discussion between PRO-owner and ASP-owner did not reach conclusion although a lot of common understanding was achieved. ASP-owner wanted to secure the operation and most of all responsibilities moving from high level topics to details, whereas PRO-owner was for adjustments as they appeared. Partly because the contract was open ASP-owner was rather cautious to proceed into commitments. This seemed like sloppiness to PRO-owner causing shift of focus to talks with NPR-owner, who was owner of Project Company's the Sub-contractor at that stage. Considering this through the Hybrid contracting styles by Williamson (2008) (see Table 1) it appears that there was a mismatch the owners did not notice. PRO-owner was looking for a Disequilibrium style that would evolve to Benign style in order to maximise the movement with a belief that if the co-operation became significant then there would be interest and reason to agree issues on mutually beneficial way as they arise. ASP-owner in turn was looking for a Credible contracting style based on hard contracts that cover as many circumstances as possible to enable greater focus on the business content once one got that far. Interestingly later on, when NPR-owner received the first frame contract proposal, he saw it as peremptory and slaving for the New Project Company – in other words following Muscular style – although factually the power in the relationship was on the (New) Project company side. In praxis the style was Disequilibrium as no proper structures were set in place.

The appearance of the network business model to the NPR-owner, the major share holder of the New Project company

There are many factors why the network business model did not appear to be successful from the New Project company's point of view.

First of all as the NPR-owner became the one in power, according to his words he did not know anything about the talks with ASP. In other words the co-operation had not been sufficiently relevant to be part of the discussion when the Sub-contractor and Project company business were brought together reflecting a realised moral hazard of agency theory (Eisenhardt, 1989) as well as low Network Governance (Jones et al., 1997). His primary concern was to get the two (or in fact three companies as NPR-owner had bought one more company in the same transaction) together and to harvest more business out of their existing customer base. Secondly, his view was to work exclusively using the new company brand in the front, which was in conflict with the initial subcontractor agreement with ASP to operate under the ASP brand towards the ASP customer base. Thirdly, the idea of Project company and now the New Project company to be the responsible development partner did not convey to NPR-owner – it seemed like a volatile body shopping relationship i.e. the Muscular hybrid style contacting (Williamson, 2008). Instead NPR-owner was ready to pay commission on successful project leads, which would have meant for the ASP no extension in their recurring business i.e. for them it would have been a misfocused effort.

One can say that there was no longer common understanding of the business goals, strategy or business logic and thus no future for the business network or even for co-operation as highlighted by Virtanen et al. (2005). The attempt to create a business network using dual business logic failed.

The network failure can be evaluated using the Industrial Network Approach and the fundamental network elements identified by Håkansson and Johansson (1992). In this context the actors are at first ASP-owner and PRO-owner that is later replaced by NPR-owner as they control the resources – most of all the time of the staff, the competencies and access to customers. It becomes apparent that in the end the strategy and performance can hardly be excellent, when the combinations of the activities to reach agreement, create mutual processes, conduct sales and marketing are not mutually intentional due to lack of connection between some of the actors. This notion is seconded by Erwee (2001) as he highlights the importance of processes shifting

power and accountability between organisations. Further, Erwee has also classified network dynamic dilemmas into interdependency, competition and cooperation; and trust.

This network formation attempt like already said was not balanced in terms of interdependency. ASP was more dependent on the New Project company than vice versa. That certainly contributed to competition and cooperation Erwee refers to. For instance ASP-owner felt in one occasion that NPR-owner was looking forward to capture an account as the New Project company had established direct discussions with one of the ASP's customers.

In order to tackle some of these inconsistencies probably traditional team building would have been in order. There was not really an effort for team formation leaving NPR-owner and NPR-ceo out of the discussions, whereas key person in ASP were at least partially participating into the negotiations. Sheard and Kakabadse (2002) highlight four stages for effective team creation moving from Forming to Performing via Storming and Norming. Their key finding is that the level of understanding and acceptance of issues as well as the level of non-shared assumptions varies strongly in different formation stages. Also Erwee (2001) highlights the need for participative leadership, shared responsibility, alignment of goals, effective communication and many more for a team to provide high performance. Clearly this level of teaming was not achieved.

5.3 Social capital in the case network

Social capital is categorised in three classes (Nahapiet and Ghoshal, 1998)

- Structural embeddedness
- Cognitive dimension
- Relational embeddedness

In the following the case business network is evaluated for each class separately.

Structural embeddedness

Structural embeddedness concerns the properties of the social system and of the networks relations as a whole. This is the prerequisite to start building social capital – the connection.

In the case network the structural embeddedness played an important role in the evolution of the relationship.

In the beginning a sales person from the Application Service Provider established the relationship between the Application Service Provider owner (ASP-owner) and the Project company owner (PRO-owner) as he had been previously in contact with PRO-owner. PRO-owner had heard about the ASP company and the owner before, but not actually met. Thus at the starting point there was only a weak tie between the companies as well as the two persons. This is illustrated in the Figure 14.

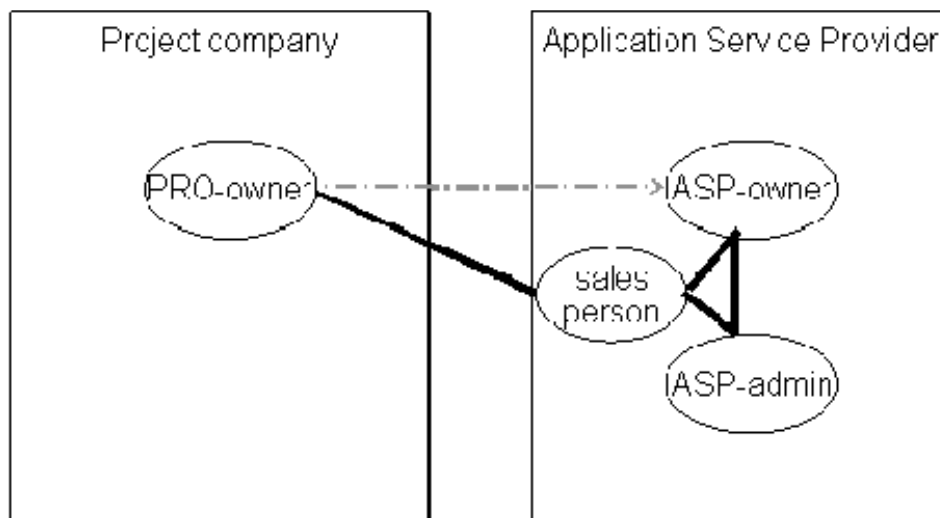


Figure 14: Initially only weak ties between companies

As the negotiations for co-operation commenced the tie between the company owners became rather intense. Discussions were conducted on equal bases thus on hierarchy they were at the same level. Consultant that was to become later the CEO of the New Project Company (NPR-ceo) knew that some discussions were taking place, but he did not have active role at this stage he was simply working from the same premises as the Project company, but not for it. He had also heard about the Application Service Provider company and about its owner before. The subcontractor company and its owner (NPR-owner) did not have any connection with the ASP. Figure 15 illustrates this stage.

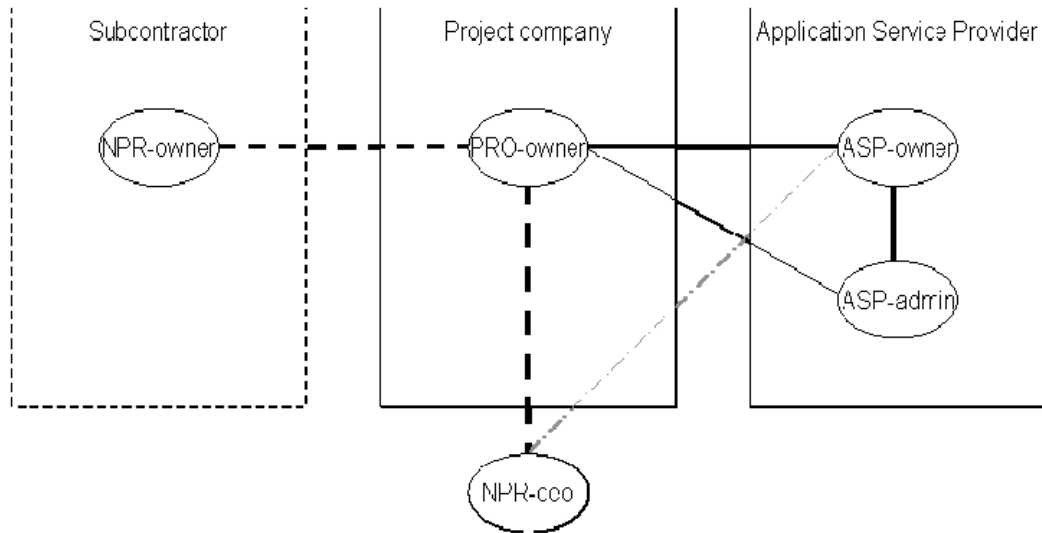


Figure 15: During the negotiations very intense tie between owners

Later when the discussion did not seem to advance into business results the social system started changing significantly. PRO-owner and NPR-owner began serious discussions of business merger of the Project Company and the Subcontractor company. A consultant (NPR-ceo) was requested to become the arbitrator or counsellor for managing the discussions. Then obviously the PRO-owner focus shifted to the owner of the Subcontractor company (NPR-owner) and the relation to Application Service Provider company reduced although there were still plenty of planning activities among others the decision to move to the same office building. This stage is presented in Figure 16.

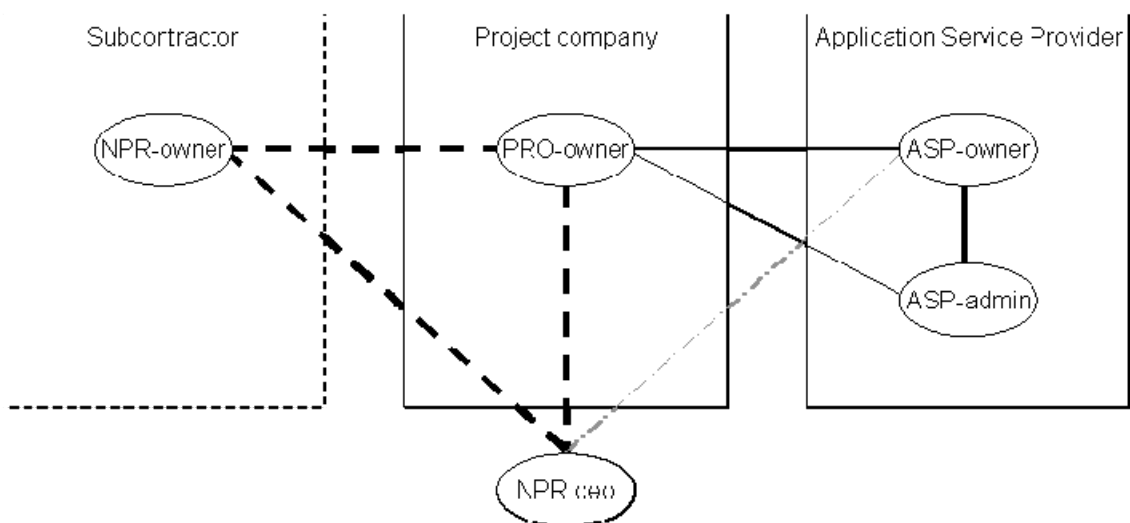


Figure 16: Project company focus shifts to creation of the New Project company

The talks between PRO-owner and NPR-owner with the help of a consultant (NPR-ceo) lead eventually to the formation of the New Project company. Now, the power had shifted. NPR-owner became the major share holder and the one with the final decision power in the new company. Quite important point is that NPR-owner had never been in touch with the Application Service Provider and during the scope of this study would never be i.e. now there was only a weak tie between the final decision makers in the respective companies. The situation is shown in the Figure 17.

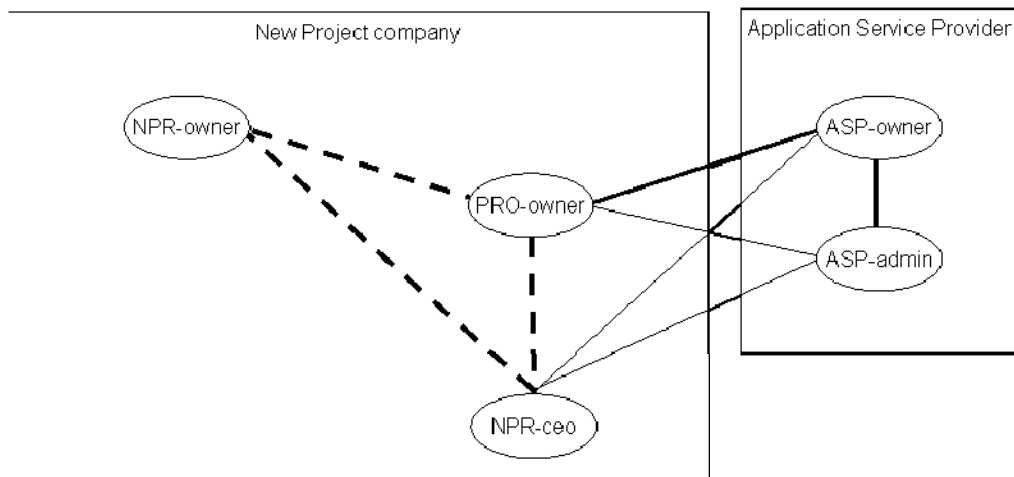


Figure 17: Formation of the New Project company changes power and hierarchy

The gap between companies grew when PRO-owner moved out of the New Project company and the responsibility of the relationship was assigned to NPR-ceo that had become the New Project company CEO. NPR-ceo had in the meanwhile established a relationship with ASP-owner and ASP-admin as illustrated in the Figure 18. His task was more or less to tidy up to desk and bring the co-operation to a gentleman like end.

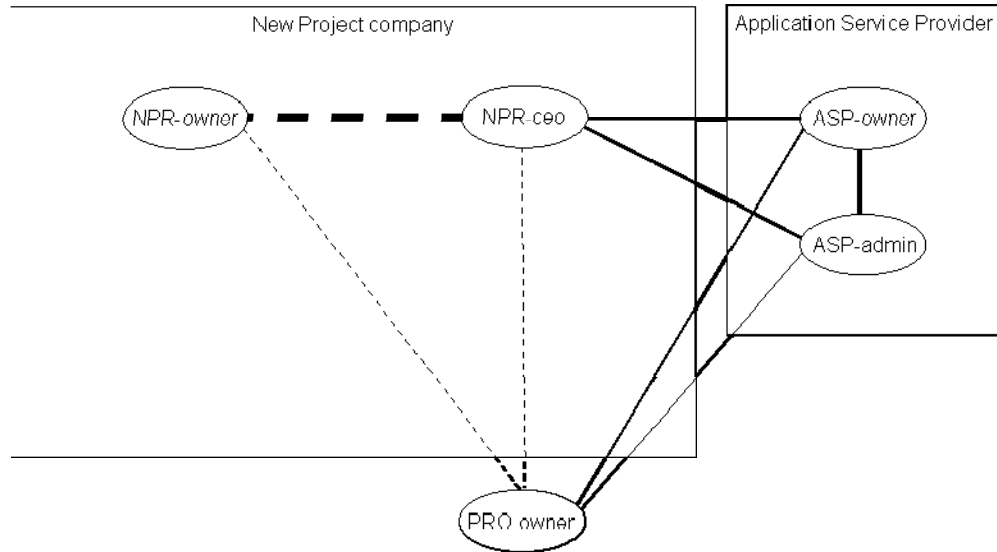


Figure 18: NPR-ceo replaces PRO-owner in relationship interface

Summarising the structural dimension of social capital one can say that it was sufficient and appropriate until the formation of the New Project company. Since then the mere relationship between ASP-owner and PRO-owner was not sufficient. It was narrow and too futile to carry the social structure.

Cognitive dimension

Cognitive dimension refers to those resources providing shared representations, interpretations and systems of meaning among parties. It forms the common language or communication protocol.

In this case one needs to analyse the systems of meanings between different individuals. There are three core pairs: ASP-owner and PRO-owner, ASP-owner and NPR-owner and the third one is between ASP-owner and NPR-ceo (Figure 19). Also the art of communication between PRO-owner and NPR-owner would have been interesting, but it will be omitted due to lack of data.

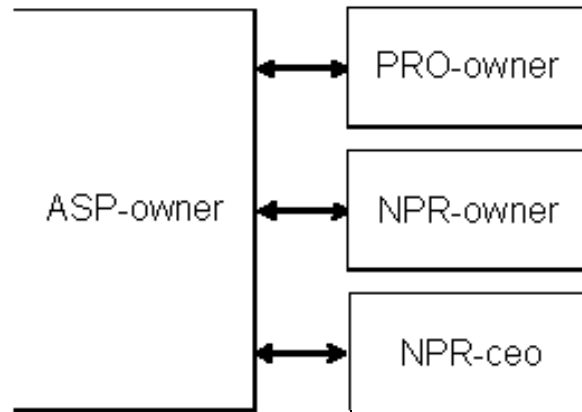


Figure 19: Core communication links for analysis of cognitive dimension

All the involved parties are Finnish natives, speak the same language, live in the same geographical area and are in the same line of business i.e. IT. Thus in many ways the starting point for reaching common language to convey information is very much given.

Cognitive dimension between ASP-owner and PRO-owner

ASP-owner and PRO-owner both are very social and talkative persons. It is easy for them to establish new relations and get into talks with strangers. Both of them also share strong religious faith and the value system that goes along with it. In this way they are very similar. They are also very different. PRO-owner wants to make fast decisions, move quickly forward in as informal way as possible. A lot of the discussion is figurative and targeted more to make the point instead being factually very exact. ASP-owner in turn is rather cautious, wants to formalise and agree issues formally. Maybe because of this he takes promises and suggestions literally as facts or commitments. In a way ASP-owner and PRO-owner understood each other generally content wise well, but they could not see the mismatch in issues like timing and the level of details.

Cognitive dimension between ASP-owner and NPR-owner

ASP-owner and NPR-owner did not have a direct contact or relation thus the foundation for cognitive dimension was at the level of basic business conduct within the same cultural area. Thus when ASP-owner shared a co-operation contract proposal by e-mail, NPR-owner interpreted it solely based on the text with immediate no go or

at least a very reserved positioning. In a similar way ASP-owner took a very negative stand – nearly as a personal insult – some misplaced invoices the New Project company sent. No common language was found or even really searched

Cognitive dimension between ASP-owner and NPR-ceo

The third significant pair was the connection between ASP-owner and NPR-ceo. The character of NPR-ceo is of a business professional. He has very clear communication with capabilities for both listening as well as being persuasive. Rather quickly ASP-owner and NPR-ceo were able to establish a common language.

All in all, one can say in a similar way to the structural dimension of social capital the cognitive dimension of social capital was in relatively good shape before the New Project company was established, but after that the real decision makers did not have a connection or common language. The fact that NPR-ceo was assigned to clear the relationship was a fortune for both involved companies as although it did not change the co-operation to great success, it did manage to bring it to the end without any outstanding claims from either side.

Relational embeddedness

Relational embeddedness describes something about the nature of the relationships the people have developed with each other in various encounters. It can be seen as the quality aspect of the relationship.

In Merriam-Webster on-line dictionary trust has been defined as

- 1a) assured reliance on the character, ability, strength, or truth of someone or something
 - 1b) one in which confidence is placed
 - 2a) dependence on something future or contingent : hope
 - 2b) reliance on future payment for property (as merchandise) delivered : credit
- plus couple other definitions more related to legal conduct and banking world.

Adapting the Merriam-Webster definition for the purposes of this study three aspects of trust are treated separately. Namely:

- trust for honesty
- trust for good will
- trust for capability to deliver business results

This division is relevant as all of these aspects were not necessarily valid at the same time. Another important issue is that different aspects of trust are time dependent and appeared to have their own course of development.

Again the most relevant relationships to be considered are the ASP-owner – PRO-owner, ASP-owner – NPR-owner and ASP-owner – NPR-ceo. There is also indication of dramatic change in trust between PRO-owner and NPR-owner over the time culminating to the fact that PRO-owner moved outside the New Project company to pursue other goals. However, very little factual data has become available in the interviews to explore this aspect more thoroughly.

A characteristic of the relationship between ASP-owner and PRO-owner was very high mutual trust in each other's good will – a friendship. This seems to have developed rather quickly with the support of common religious faith. This did not change during the study as it remained even when PRO-owner moved out from the New Project company. On honesty aspect of trust both believed the other person to be honest, but not necessarily exactly according to their own definition of honesty. This becomes visible when one considers how exactly promises are kept for instance. The greatest change in trust was related to the capability to deliver business results. In Spring 2010 PRO-owner came to conclusion that ASP as a company would not be able to fulfil his expectation of business results changing his trust in this aspect. He remained hopeful, but did not expect much anymore. The ASP trust in the (New) Project company was not put to the test as no contracts requiring delivery were made.

The relational embeddedness aspect of social capital between ASP-owner and NPR-owner was non-existent.. This is rather relevant for the inter-firm relationship as the lack of trust in the end of the day was a significant contributor for not even finding a way to build the connection and common language. This appeared to be a vicious cycle. A justified question – without answer though – is how much the events that lead to PRO-owner leaving the New Project company contributed to the willingness and interest of NPR-owner to establish a direct relationship with ASP-owner. In fact, ASP-owner did request for a meeting in multiple occasions, but this did not take place.

The relationship between NPR-ceo and ASP-owner was most of all a business relation. Both parties respected each other as persons and acts followed the talks. At this stage the decision – at least informally – was already made not to try to achieve any major co-operation. The relevant aspect of trust was honesty and that was shared between parties. The ability to deliver business results was not relevant at this stage anymore.

In summary the relational embeddedness of social capital grew quickly to rather high level between the Application Service Provider and Project company owners. However, the trust began deteriorating with the different expectations regarding business results. Once the New Project company was formed trust relationship towards ASP was never passed on from PRO-owner to NPR-owner being more or less the death sentence to the co-operation.

Considering social capital more generally in the light of this case one can say that it is very person dependent at least in its earlier phases. From risk management point of view it is very difficult for a company to manage the internal processes of another company and to ensure continuity when people change jobs and the team does not stay intact (Erwee, 2001). It seems that one would need to maintain multiple several level interfaces. This in turn requires quite a lot effort and resources reducing the overall benefit from the relation compared to in-house activities, where the power and communication structure are more controlled.

5.4 Case business network development stage

Batonda (1995) has defined five development stages for a network. In the first stage the companies are essentially searching for partners. In the 2nd stage the relationship starting process begins by identification of inter-firm and interpersonal dynamics followed by relationship development processes in the 3rd stage. 4th stage is dominated by maintenance processes until in the final 5th stage it is time to terminate the relationship. In Figure 20 the perceived network development stages for the case network have been illustrated. It is remarkable that the perception of the relation was at times rather different between the parties.

Initially both were looking for partners for different reasons. Once they found each other a good match seemed obvious for both companies leading very quickly to stage 2.

Now, the differences between ASP-owner and PRO-owner came to play. PRO-owner was nearly immediately convinced that very deep co-operation between the Project company and the Application Service Provider would be the best thing to do thus he proposed a merger of the two companies. This proposal contains many of the typical requirements for a stage 4 relationship i.e. integration of operations and strategies, institutionalised conflict resolution procedures by shared ownership etc.

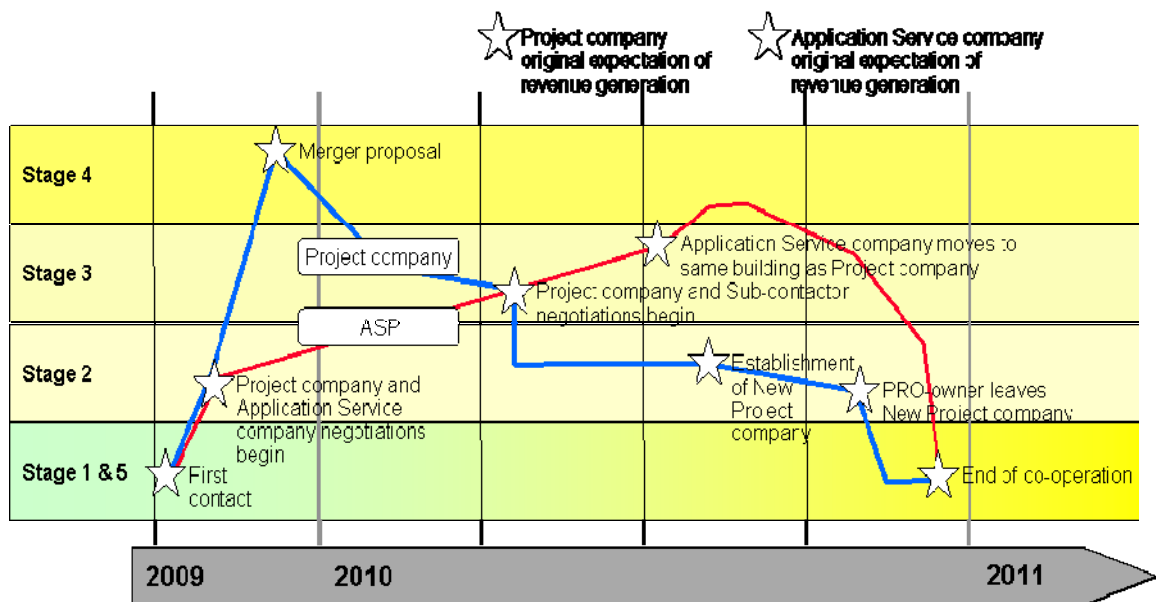


Figure 20: Perceived network development stages following Batonda

ASP-owner in turn moved far slower according to his character taking such proposal from PRO-owner as flattering, but not serious. He wanted to define mutual goals, share of responsibility and many other things formally on paper before moving ahead. This more or less diluted PRO-owner's initial enthusiasm and locked him into seemingly everlasting discussions. PRO-owner shared the view of defining goals, but preferred to be more informal and maintain better capability for adjustment by agreeing as the things would pop-up in praxis. Despite of the feeling of no progress the PRO-owner was having apparently ASP-owner did gain something constantly as the courage, preparedness and hope to conduct joint business steadily grew all the time reaching its peak with the decision to move into the same office building with the Project company. This can be considered a stage 4 level decision from the ASP.

However, already before this PRO-owner had lost faith on one side in the ASP business capabilities and on the other on their capability to make decisions and agree things thus he had began negotiations for merger with a Project company's sub-contractor company . These talks lead quickly to result and New project company was formed with the sub-contractor company's owner as the main share holder (NPR-owner).

ASP-owner initially considered the establishment of New Project company as positive development – after all the most important partner would now be stronger and would have even greater ability to provide services and products for the ASP. However, PRO-owner was clearly back in stage 2 questioning what would be the mutual goals and what could the business be that takes place in praxis instead only in the paper exercise conducted so far. Common understanding on these are some of the key network success factors identified by Virtanen (2007). Nevertheless, PRO-owner was in the mode to find common way forward, but he did not have the decision power on behalf of the New Project company and the NPR-owner could not see or understand the business benefit in spending time in discussions with the ASP. Now, ASP was in high hopes in stage 4 mindset, where as the New Project company was already considering moving into stage 5 – the termination. As PRO-owner moved out from the New Project company this also happened rather swiftly. A set of misplaced invoices on New Project company's behalf accompanied with lack of connection and with that any level of trust between NPR-owner and ASP-owner brought also the ASP company from the dream of fruitful long term relationship to desire to find a quick way out of any co-operation. This also brought stop to all sales and marketing activities that would have required joint efforts.

If the relationship is observed via post-analysis there are similarities and differences to the perceived views by the involved parties. Clearly the starting point and quick movement to stage 2 are common with the perceived views. However, the relationship never reached stage 4 as in reality it would have required true operational business to take place. On the other hand in the 1st half of 2010 there were more tangible efforts to move toward the business results than PRO-owner perceived as joint discussions and meetings with the existing Application Service Provider customers took place. This was a very large step for ASP-owner to take. After all, ASP put its credibility in front of the customers at stake, when the Project company was presented. These activities qualify for Batonda stage 3 due to joint planning efforts, preparedness of committing resources and people.

Once the negotiations between the Project company and its sub-contractor began it is fair to state that the real mutual ambition to build something important together was gone – clearly not solely because of the other negotiations, but for all reasons that encouraged PRO-owner to move into that direction. Further, evidence of this is that the Project company – Application Service Provider relationship was not part of the negotiations with the Sub-contractor. Had it been (still) considered as an important future asset, information about it would have been surely shared to NPR-owner as well as to the consultant (NPR-ceo) who was counselling the discussions.

As the New Project company was established and NPR-owner became in power the shift towards termination of the co-operation more or less began. The road to end was clear when PRO-owner left the New Project company.

This post-analysis is illustrated in the Figure 21.

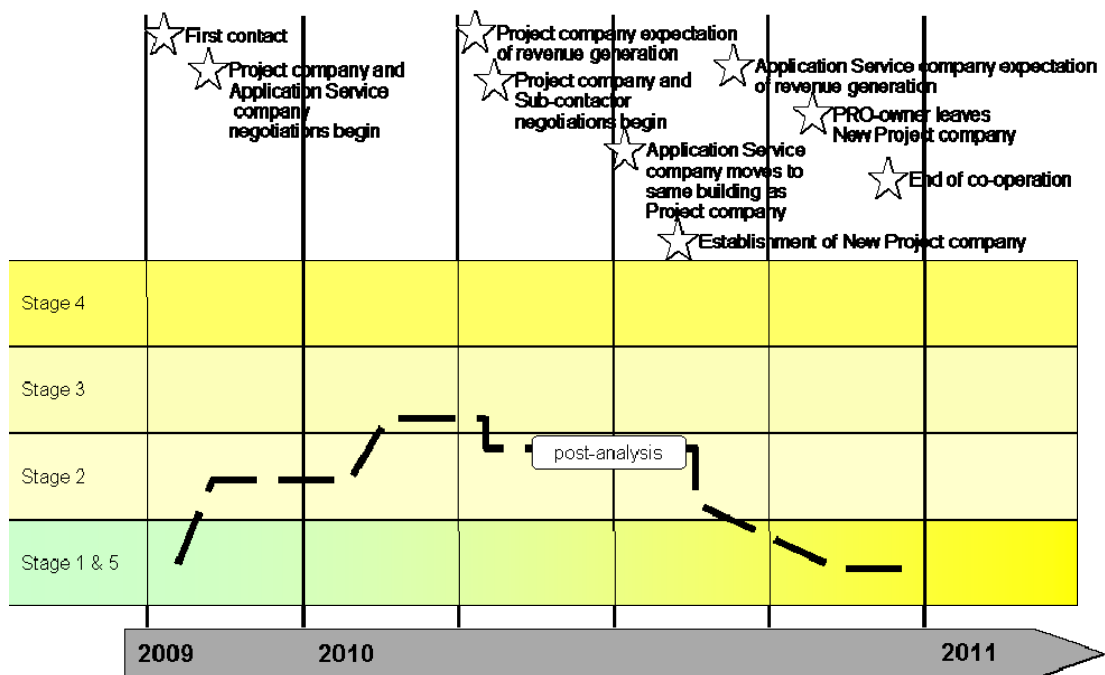


Figure 21: Post analysis of case network stages following Batonda

6 Discussion and conclusion

In this chapter an attempt to answer questions like what would have been required for the model to work and what kind of model would have worked is provided. Some differences between the praxis and the theory are presented. Also the case study as a whole is discussed especially looking into the limitations. In addition, some suggestions for generalisation and further research are provided.

6.1 Summary

The objective of the study was to develop a network business model for software business or more precisely for application service providing business. This is relevant because the operation of companies is largely resource limited leading to the need to team up with other organisations. (Westerlund 2009, Ahlström-Söderling, 2003, Erwee 2001, Larson 1991)

The aim was to answer to the questions:

- 1) What kind of network business models can be found?
- 2) What are the value creation mechanisms as well as advantages and disadvantages of different models?

In the study several different models were developed. In empirical part a failed attempt of establishing a business network between a project oriented company and an Application Service Provider was evaluated in the light of the traditional economic theories such as Resource based View (Wernerfelt, 1984) and Transaction Cost Economics (Williamson 1975, 2008) as well as network theories ranging from theories on social- and cultural embeddedness (Granovetter 1973, 1983), Social Capital (Nahapiet and Ghoshal,1998), Strategic Networks (Westerlund 2009), Network Governance (Jones et al, 1997; Williamson 2008) and Business networks (Erwee 2001; Batonda 1995). The frame used for the business model creation was adopted from Shafer et al (2005).

The leading thought for the business model creation was differentiation by business logics. Beyond this there were apparent differences on the core benefits or advantages

the business models were aiming for. Also the key challenges or disadvantages were discussed. Special attention was given to the adaptivity of each model, when either internal or external changes occur. Mechanisms for value creation and capture were also identified.

For the case environment the dual business logic on operational mode model was chosen as it matched the premises of the case network companies: low capital intensity and strong separate focus on both of the conducted businesses. The major advantage was to achieve opportunistically more income per development hour. For the ASP this meant wider service product portfolio without upfront payment and for the Project company continued income even after project completion. In other words create more value out of the same work and capture it in income. The disadvantages were the one sided interdependency and with that a substantial risk of agency cost (Eisenhardt, 1989).

6.2 Was there a possibility for network business

Despite the fact that the attempt to build a successful business network failed it is worth while to speculate how the presented business model would have had a chance between ASP and the New Project company.

In a modest role as part of the dual business logic a mutually successful business relationship could have been established. The New Project company has constantly projects that result in outcomes which could provide added value for the ASP customers, provided that the original projects were implemented with a slight understanding of the ASP customer base requirements. This would not form a very significant part of the New Project company turn over, but nevertheless its Return on Investment (ROI) would likely be rather high as the development would be done anyway and the ASP personnel would carry the responsibility for the day to day care of the additional customers. The cost for the New Project company would be mainly in the time consumed to share information concerning the on-going and coming projects as well as in gathering understanding on the ASP customer requirements. Nevertheless, due to the probably rather modest business volume of some tens of thousands Euros per annum the ASP should not expect to have much of a guidance function in the New Project company projects and in that sense the business model would not operate in its optimum.

Still, in order to get to that point a significant investment in social capital between NPR-owner/NPR-ceo and ASP-owner would be required. Now, as the New Project company has its hands more than full anyway, there are probably other instances for such investment than this relation. Beyond that there are also plenty of other obstacles to be overcome for instance ASP would need to demonstrate its business capability performance.

In other words, the bottle neck for establishing a business network is not primarily in the business logic as such, but in the lack of social capital as well as apparent evidence in business performance. Some of the identified deviations between the original expectations at the beginning of the study and the praxis are presented next.

6.3 Deviations between expectations and praxis

In hindsight one can say that the expectations for human capabilities to team up were higher than the reality proved to be. In similar fashion the business boundaries were not as clear as presumed. Also the complexity related to establishing specialisation and harvesting business benefits out of it was a surprise.

Maybe the most important deviation between the expectation and the praxis was that providing software applications as a service was no longer a speciality with high demand of unique competence. Instead it is becoming a commodity resulting that there are far less pure software project companies. NPR-owner stated that hosting a project result was simply just another way of software packaging.

The notion of reusing components was unanimously supported, but at the same time especially PRO-owner and NPR-owner highlighted the technological speed of change in software business to be so high that software components tend to become very quickly obsolete or directly incompatible leading to situation that the same function may be more cost efficient to re-implement. This reduces the business benefit of the presented dual business logic between a project oriented and application service oriented companies.

The role of the human factors was expected to be high – that is after all the reason why theories of social capital and networking were included – but the difficulty for

different parties to find ways for sustainable co-operation was a surprise. Here the attempt was between two-three companies and from two to four persons and yet it was not possible to pass on the trust nor agree common goals that each participant would have known them and committed to them. The complexity and difficulty was expressed by NPR-owner as he said that operational agreements can be dyadic or at most between three parties - beyond that it gets too difficult to manage. In a (loose) network, however, there can be plenty of entities that are contacted as required. Thus the effort of getting multiple parties agreeing is very high and likely leads to compromises that do not utilise the full potential the network has.

Because the co-operation is difficult the parties are more or less required to be careful resulting that even the operational expenditure savings and higher resource utilisation cannot be fully harvested as full specialisation would leave a party too vulnerable to changes beyond one's own control.

These deviations or differences have been gathered into the Table 9

Table 9: Apparent differences between expectations and praxis

Expectations	Praxis
Operational model clear cut responsibilities and activities	There are no pure project or service companies – application service providing is just one form of software product packaging
Co-operation works between companies, each takes care of their duties in an efficient way with high integrity and commitment.	It is immensely difficult to build high level of social capital between all relevant parties and different personalities. Business performance of the companies is generally far from optimal. Reaching common vision between multiple companies is challenging leading to largely wasted business potential
Software components are easy to reuse resulting in high cost efficiency	Software components become outdated very fast and the change speed of software platforms is very high resulting in increased integration cost leading to situation that it may well be cheaper to re-implement the required components
Companies reach lower OPEX and higher resource utilisation by specialisation	This is probably true, but might leave a highly specialised company so vulnerable that they cannot take the risk

6.4 Evaluation of the case study, limitations and suggestions for future research

The selected approach of looking into business model, evaluating social capital and analysing the stage of the business network relation has brought insight to the multidimensional reality of business relations. None of the selected aspects alone could have explained what happened in the attempt to form a business network over the period of Autumn 2009 to late 2010. With a bit of a formalisation it can be claimed that the mutually beneficial business model forms one leg and strong inter- and multi-personal connection another one. Both need to be in very good condition in order for the business network to reach true existence, let alone success of any sort. With the help of Batonda it becomes evident that even the desired pace to carry out discussions and actions needs to have a match.

Considering the challenges the case network encountered it appears that forming a business network and maintaining it in operation over longer period is very challenging and close to impossible as the environment, the involved entities as well as their stake holders are dynamic and change over time resulting a never-ending source of challenges and conflicts. This is also supported by the outcomes of Larson (1992) and Ahlström-Söderling (2003).

Clearly this outcome can only be taken as a hypothesis for further research as this case study has a number of severe limitations. First of all the study of theoretical material is not exhaustive by any means. Secondly the empirical material consists only of a business network creation attempt by two Finnish rather small size firms. The network did not really reach operational stage thus the evidence on durability related to networks that become truly active is weak.

Most certainly a case study under different cultural environment, with different size firms, from a different segment or at different stage of co-operation would have provided at least to a degree different kind of results.

Yet another limitation that needs to be bore in mind is that the author of the study has been partly connected to one of the key companies under study resulting that the results are to be considered as an outcome of a participating research. This may have caused some bias in author's evaluation of the interview material and the situation as a whole as well as may have caused the interviewees to express themselves differently

compared to a complete outsider. On the other hand there may have also been higher openness between the author and the participants enabling a more honest feedback than what one would have been prepared to share otherwise.

Suggestions for future research

In further research it would make sense to generalise the findings in quantitative research within the software segment as well as outside the segment. This could provide mixed-method approach resulting more likely to more comprehensive understanding of phenomena.

In order to reduce the complexity in the research setup one could look forward to study successful setups like the creation of Angry Bird and to identify the known or de-facto business network behind the success. Alternatively one could look for failed business networks as well as attempts to create one to see, if the causes for failure are similar to this case study.

It would be interesting to see if there were major differences, if the studied firms were found by persons that readily enjoy high social capital with each other – say the all come from the same entrepreneurship incubator or similar.

6.5 Contribution and conclusion

The essence of the theoretical contribution is in the finding that building a business network is a complex multifaceted time dependent issue. In the business networks research most of the studies have been snapshots. However, a snapshot does not provide evidence of the future. Therefore the same analysis should be done in different stages and times of the business network life span. In order to gain further insight, which factors have contributed in keeping the business network in question full of life.

In the light of the case study four dimensions for analysis seem outgrow the others (Figure 22). It is vital for a business network to have economical sense – as a network as well as a for each participating company and probably also for each key person. This has to be delivered by adequate business performance of the network and its participants. Business model is required to formalise the common understanding of the economic sense and the business performance. Social Capital is the glue that enables

the network to perform using the business model as a tool and deliver the economical sense as well as adapt and find new course of action, when that is needed.

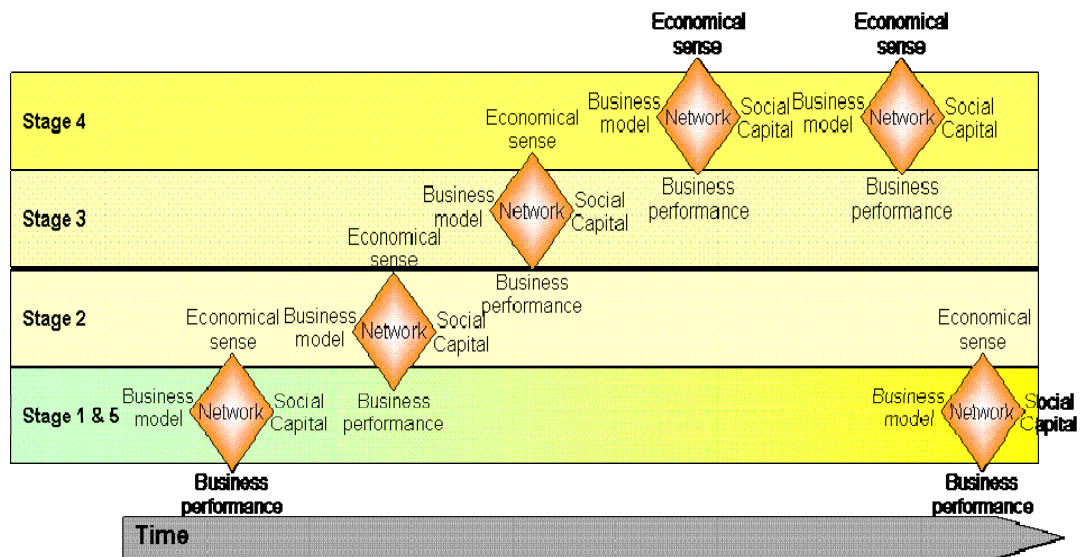


Figure 22: Business network creation dimensions

The traditional economic and business theories help to identify the economic sense as well as business performance. Shafer et al (2005) likewise this study contribute to the business model and Nahapiet and Ghoshal (1998) to Social Capital. Bearing Batonda's (2003) stage model in mind as Erwee's (2001) contribution to high performance teams helps to guide the network creation.

In managerial context already merely understanding the complexity and the likelihood that one or other dimension of social capital might not be perfect, enables a manager to become aware of some of the pitfalls. Taking a formal business model as a tool and openly together with the other network creation parties defining the criteria for performance as well as expectations for economical sense helps to achieve common understanding of the joint goals and activities to reach them. Recognising the dynamic nature of companies themselves, the customers, markets and the environment one is better positioned to ensure sufficiently many key persons are deeply involved to enjoy high social capital with others to compensate for personnel changes and to keep periodically reviewing the business network creation dimensions to be able adapt as needed. One possibility would be to use Cooperative Game Theory modelling (Savunen, 2009) to evaluate stability, business dynamics and changes in the business environment. Should the network participants take the effort to create such formal

model the outcomes are likely to be evident during the process as it requires rather deep involvement.

The key high level contribution to entrepreneurship studies is the knowledge that there can never be too much or too wide social capital. Mutual business benefit in co-operative relationships provides time to establish new connections and relations, when business networks change, but even that is not sufficient alone and vice versa. Very high social capital does not replace the need to constantly provide satisfactory business benefit to other party, but it may give time and support to overcome challenges.

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Appendixes

7.1 Theme interview framework

1. Taustatiedot

Case yrityksen nimi:

Haastateltavan nimi:

Haastateltavan asema case yrityksessä 2009–2010:

Yrityksen perustamisvuosi:

Miten liikevaihto on kehittynyt viimeisen 5 vuoden aikana?

- Mitkä ovat olleet pääsyyt liikevaihdon kehitykseen?
- Onko erityisesti yhteistyösuhteilla ollut merkitystä?

2. Liiketoiminnan määrittäminen

Mikä on yrityksen pääliiketoiminta? Mistä tulos tulee?

Millä markkinoilla ja toimialoilla yritys toimii?

Mikä on kilpailutilanne?

Mikä tekee yrityksestä kilpailukykyisen?

Millä liiketoimintalogiikalla yritys toimii?

- Miten liiketoiminnalla ansaitaan? Mikä on ansaintalogiikka? Kuka maksaa tuotteesta/palvelusta ja kuka sitä käyttää?
- Onko verkostot / yhteistyö muiden kanssa oleellista? Miten yritys on järjestäytynyt/verkostoitunut?
- Millaisilla arvoilla yritys toimii?

Verkostoituminen ja yritysten välinen yhteistyö

3. Yhteistyösuhteen kehitys

Miten suhteen muodostuminen case yrityksen kanssa alkoi?

Miksi haitte yhteistyötä? Mitkä olivat oleellisimmat tekijät/tarpeet/syyt yhteistyöhön pyrkimiseen?

- Ovatko nämä syyt yhä voimassa?

Miten tärkeästä yhteistyöstä oli kyse, kun sitä suunniteltiin?

Miten suhde kehittyi?

- Mihin suhde perustui? hyvä tahto/sopimus/mikä?
- Olivatko henkilökohtaiset suhteet merkittävä tekijä?
- Voidaanko suhteella nähdä elinkaarta/merkittäviä käännepeiteitä? mitä ne olivat ja miksi?

Kuka oli vastuussa suhteesta ja sen menestymisestä?

Miten kommunikaatio toimi osapuolten välillä?

4. Liiketoimintasuhde ja sen ominaisuudet

Mitä liiketoiminnalta ja liiketoimintataesuhteelta odotettiin?

- Millaista hyötyä tavoiteltiin? Myynnille/kustannus- tai organisaatorakenteelle/brändille...

- Miten hyöty odotus muuttui suhteen kehittyessä?
- Miten koet hyötynneesi suhteesta? Miten hyödyit verrattuna muihin osapuoliin?
- Miten tärkeä liiketoiminta suhde oli strategisesti?
- Oliko jommallakummalla osapuolella enemmän valtaa suhteessa?
- Oliko suhde tarkoitettu pitkäaikaiseksi?
- Mikä oli yrityksen sitoutuminen suhteeseen ja miten se kävi ilmi?

Millaisia yhteistyöhön ja yhteistyösuhteeseen liittyviä riskejä tunnistettiin?

- Toteutuivatko jotkut niistä?
- Mitä riskejä olisi pitänyt tunnistaa?

5. Nykytilanne

Mikä on suhteen nykytilanne?

Mitkä tekijät ovat edesauttaneet/johtaneet nykytilanteeseen?

- Yritysten välinen suhde, henkilösuhteet, taloudelliset syyt, ympäristö ja sen muutokset, sisällölliset tekijät, sopimustekijät
- Toteutuivatko jotkut riskit? Mitä riskejä olisi pitänyt tunnistaa?
- Mitä investointeja on tehty suhteen eteen?

6. Millainen on menestyksekkäs verkosto yhteistyö? Mitä tästä opittiin?

Mitkä ovat oleellisimmat menestys tekijät yhteistyölle?

Mitä tästä opittiin? Mitä tästä voi kertoa lapsenlapsille?

Miten projekti tuotekehitysyrityksen ja palveluntarjoaja yrityksen yhteistyö kannattaisi järjestää?

Lisäkysymyksiä ajan salliessa

Make or buy

Miksi pyritte yhteistyöhön yrityksen sisällä tekemisen sijaan?

Miksi yhteistyösuhde tässä tapauksessa vaikutti paremmalta kuin fuusio/yritysten yhdistyminen?

Miten helppoa/vaikeaa on perustaa vastaava yhteistyökuvio?

Sopimus

Oliko kirjallista sopimusta?

Miten toiminta oli määritelty?

Oliko kiistojen ratkaisumenetelmiä?

Mitattiinko tulosta? Miten?

Millainen kontrolli oli?

Miten tämä suhde erosi muista suhteista?

7.2 List of the interviews

Firm	Interviewee	Position	Place	Date	Duration
Application service provider	ASP-owner	Majority owner and CEO	Helsinki, Finland	03.06.2011	1 hour 5 minutes
Application service provider	ASP-admin	Administrative manager	Helsinki, Finland	20.05.2011	50 minutes
Project company	PRO-owner	Majority owner and CEO	Helsinki, Finland	10.06.2011	1 hour 47 minutes
New Project company	NPR-owner	Majority share holder and former subcontractor company owner	Over telephone	01.06.2011	34 minutes
New Project company	NPR-ceo	Merger consultant and later New Project company CEO	Helsinki, Finland	20.05.2011	45 minutes

The companies as well as the interviewees were granted anonymity.