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**THEORETICAL BACKGROUND FOR
MARKET EMERGENCE FRAMEWORK –
CASE: ELECTRICITY DISTRIBUTION INDUSTRY**



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Case: Electricity Distribution Industry**

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ABSTRACT

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Theoretical background for market emergence framework

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Both the competitive environment and the internal structure of an industrial organization are typically included in the processes which describe the strategic management processes of the firm, but less attention has been paid to the interdependence between these views. Therefore, this research focuses on explaining the particular conditions of an industry change, which lead managers to realign the firm in respect of its environment for generating competitive advantage.

The research question that directs the development of the theoretical framework is: Why do firms outsource some of their functions? The three general stages of the analysis are related to the following research topics: (i) understanding forces that shape the industry, (ii) estimating the impacts of transforming customer preferences, rivalry, and changing capability bases on the relevance of existing assets and activities, and emergence of new business models, and (iii) developing optional structures for future value chains and understanding general boundaries for market emergence. The defined research setting contributes to the managerial research questions “Why do firms reorganize their value chains?”, “Why and how are decisions made?”

Combining Transaction Cost Economics (TCE) and Resource-Based View (RBV) within an integrated framework makes it possible to evaluate the two dimensions of a company's resources, namely the strategic value and transferability. The final decision of restructuring will be made based on an analysis of the actual business potential of the outsourcing, where benefits and risks are evaluated. The firm focuses on the risk of opportunism, hold-up problems, pricing, and opportunities to reach a complete contract, and finally on the direct benefits and risks for financial performance. The supplier analyzes the business potential of an activity outside the specific customer, the amount of customer-specific investments, the service provider's competitive position, abilities to revenue gains in generic segments, and long-term dependence on the customer.

Keywords: Industry evolution, Market emergence, Transaction Cost Economics, Resource-Based View, Business model, Value chain analysis, Electricity distribution, Outsourcing

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1 INTRODUCTION

1.1 Background

The most important task of business management is to generate value-creating strategies that lead the performance over industry average (e.g. Barney & Hesterly 2006; Hitt et al. 2003). In such a situation, a firm is said to have competitive advantage. The previous goal of strategic management is widely studied through two competitive models; Industrial Organization Economics (IOE) and Resource-Based View of the firm (RBV). The theories guide selection of strategic actions, and explain how firms are interlinked with their environment.

The IOE assumes that selected strategic actions are driven by external environment, which leads to positioning the firms to the most attractive segments or industries to compete. In this, Porter's five competitive forces provide powerful framework on the performance of firms in an industry. In general, the firms within an industry control similar strategically relevant resources, which lead to pursuing similar strategies (Hitt et al. 2003). RBV assumes that a firm is built on a unique collection of resources and capabilities that open up opportunities to pursue differentiated strategies (Hitt et al. 2003). According to the resource-based view, a firm can generate performance over industry average, if it is capable of achieving competitive advantage by resources that are valuable, rare, inimitable, and non-substitutable (Barney 1991). In these circumstances, managerial skills to collect and control resources that enable a firm to neutralize threats and exploit opportunities become essential (Barney 1991; Barney & Hesterly 2006). Thus, as the RBV states, a firm has to be capable of implementing unique strategies, which are linked with ultimate customer value, to obtain success in industry competition (Barney 1991; Barney & Hesterly 2006; Galbreath 2005).

Now, we have two approaches to industry competition in hand. First, the IOE focuses on the question "How does the environment influence the firms?", which shifts attention to the industry-level analysis. Second, the RBV emphasizes the question about selection of organizational options

such as “What resources are needed?” and “How to orchestrate management of requisite resources?” Thus, in brief, the RBV describes the organization’s relation to its environment. Both the above-mentioned approaches to industrial organizations are typically included in the processes which describe the strategic management processes of a firm, but less attention has been paid to interactions between the described views. Hence, this report provides an overview of the theoretical frameworks that are linked with, on the one hand, the evolution of industry competition and, on the other hand, the theory of boundaries of the firm. In particular, the report focuses on the particular conditions of competition, which lead managers to realign the firm in respect of its environment for generating competitive advantage.

1.2 Objectives

The research question that directs the development of the theoretical framework is: Why do firms outsource some of their functions? This is the other side of the coin of the key managerial question in this study: How and where does a market emerge? These questions lead to the three general stages of the analysis on the nature of change: (i) understanding forces that shape the industry, (ii) estimating influences of transforming customer preferences, rivalry, and changing relevance of existing assets, capabilities and activities, and emergence of new business models, and (iii) developing optional structures for future value chains and understanding general boundaries for market emergence. The defined research setting makes it possible to contribute to the managerial research questions “Why do firms reorganize their value chains?”, “Why and how are decisions made?” and “Why do markets emerge and what are the dynamics of the market throughout the diffusion?”

The literature review introduces relevant theories concerning the transformation of the firm’s behaviour, boundary decisions, and market offering during the change of an industry. These theories are then combined into a complete construction that offers theoretical background for the developed analysis process, by which the empirical findings can be explained.

The literature review provides an overview of the Transaction Cost Economics (later TCE) (Blomqvist 2000; Rhiordan & Williamson 1985) and the Resource-Based View of the firm (later RBV) (Barney 1991; Galbreath 2008; Wernerfelt 1984), which determines the general frameworks for a value chain re-structuring process. In particular, combining the TCE and the RBV enables definition of an appropriate two-dimensional framework for firm resources, which expresses the strategic value and transferability of the resources (Blomqvist 2000; Arnold 2000; Watratjakul 2005). Strategic outsourcing is analyzed in respect of recognized resource dimensions and categories, which constitute the background for the developed assessment model for outsourcing objects (Holcomb & Hitt 2007). Finally, the objectives and modes of the customer–service provider relationship in the outsourcing proposals have been analyzed under circumstances of resource attributes (Arnold 2000; Espino-Rodríguez & Padrón-Robaina 2006; Barney & Hesterly 2006).

The research aims to define the key drivers in an industry and bring them to the micro level for screening the locus of the strategic change, which is likely to drive architectural changes of the industry. The locus of change has been determined by a Porterian framework of competitive forces (Porter 1979). The framework however cannot completely explain how radically changing customer needs affect the industry competition. Therefore the framework is supplemented by complement capabilities (Barney & Hesterly 2006; Harrison et al. 2001; Ireland et al. 2002; King et al. 2003), which are linked to the emerging business opportunities, value gains, and completely new business models.

Outsourcing in the distribution network companies was studied through two cases in the Nordic countries. Two energy distribution companies had implemented outsourcing projects, which transfer the responsibility of network construction and maintenance functions to a service provider. The study demonstrates how regulation changes a business environment and drives monopoly companies to improve their efficiency and

effectiveness. On the other hand, the analysis shows how tightened standards influence the ownership strategies and development of vertical architectures of the network companies.

1.3 Research approach

The research seeks explanations for the studied phenomena of outsourcing and industry re-structuring that emerges from the defined managerial problems. The research was carried out in close cooperation with the target companies, the challenges of which were aimed to be solved. Consequently, practical solutions had a significant role as a determinant of the research framework. Moreover, the experience of the research group has been of essential importance in interpretation of the materials and establishing the basis of analysis for the service concept. Therefore, the characteristics of this study would best be described as a constructive research approach (Kasanen et al. 1991).

The constructive research approach aims to solve practical problems that are tied with the accumulated theoretical knowledge, which requires demonstrating the actual novelty of the research. The basic framework for the constructive research approach is illustrated in Figure 1.

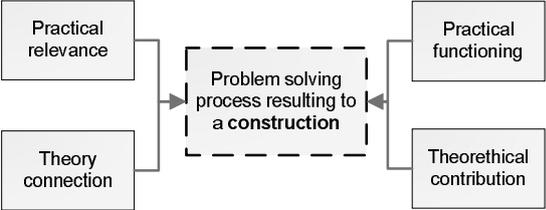


Figure 1 Elements of constructive research according to Kasanen et al. (1991)

Constructive research requires the following steps to be taken during the problem-solving process: Practically relevant problems have to be found, which also have research potential that can be determined by a simple question “Can a researcher produce any new innovative solutions to the problem?” Developing new solutions requires general and comprehensive understanding about the topic, which links both the theoretical background and analysis of the case industry. New innovative proposals are developed as solutions to practically relevant problems,

and further, the solutions to the problems are demonstrated to be workable. In addition, theoretical connections have to be shown and academic contributions of the solution verified. Finally, the scope and applicability of the solutions are examined. The described stages have to be included into the research, yet the order of the stages may vary from case to case (Kasanen et al. 1991).

The adequacy of the generated solutions can be validated by market-based tests, which require less time and resources than pragmatic analysis processes. The test focuses on the market diffusion of the innovative solutions (Kasanen et al. 1991).

- I. Weak test: Are any managers willing to apply the solution in actual decision-making for financial results?
- II. Semi-strong test: Has the construction become widely adopted by firms?
- III. Strong test: Have firms systematically produced higher profits by applying the construction?

The practical functioning and theoretical contribution is produced through a case study approach. The selected research approach allows investigating a contemporary phenomenon, the boundaries of which cannot be clearly defined in a real-life context (Yin 1994). The mode of the case analysis was pattern matching logic. In this particular analysis mode, empirical evidence is gathered to support the theoretical findings (Yin 1994). The interview research, however, provides guidance to the selection of theoretical frameworks to explain the value chain restructuring and further development of the theoretical constructs (Eisenhardt 1989). Total of eleven deep interviews were conducted in Finland and Denmark. The interviewees represented owners, managing directors, and operative management of the firms (Table 1). The review of the theoretical background was done through two rounds. First, the most relevant drivers and hindering factors for outsourcing were determined. Second, the framework for emerging architectural changes was analyzed. The analysis process of the case was iterative in which constructions were sharpened during the process (Eisenhardt 1989).

Table 1 **Profile of the interviews**

N = 11	<i>Case A (Finland)</i>		<i>Case B (Denmark)</i>	
	Network company	Service provider	Network company	Service provider
<i>Owner</i>	1	-	-	-
<i>Top management</i>	2	1	1	2
<i>Mid-management</i>	1	1	-	2

The applicability of the defined construction was examined by continuous communication with the target organization during the process. The adaptability of the construction can thereby be supposed to be rather good in a variety of competing business actor organizations in the field of network construction service.

2 OVERVIEW TO BOUNDARIES OF THE FIRM

2.1 Transaction cost economics and Resource-based view

TCE and RBV are two distinct but partially overlapping theoretical approaches to the nature of the firm. TCE concentrates on the efficiency of exchange and governance structures that are dependent on the market framework and asset specificity (Holcomp & Hitt 2006; Tsang 2000; Nieminen 2006). Therefore, the aim of TCE is selection of an optimal governance mode for activities under operative framework conditions (Blomqvist et al. 2002). Transaction costs occur always, when opportunism and bounded rationality in inter-firm relationships become evident due to uncertainty about inefficiencies of price mechanism and specificity of assets (Holcomp & Hitt 2006; Rhiordan & Williamsom 1985). Thus, TCE emphasizes profitability of “make or buy” decisions in the short term. It is notable that TCE can explain “make or buy” decisions in static market conditions, yet TCE lacks contribution to the decision-making when fundamental changes take place in industry or value chain (Jacobides 2005). The latest TCE literature takes into account the dynamic aspects of using market options, which support developing new capabilities through partnerships, although risks of opportunism or hold-up problems exist (Blomqvist et al. 2002). Based on the above, the comprehensive statements of RBV become relevant, when the significance of resources to a firm’s competitiveness, compared with structural factors of an industry, is admitted (Jacobides 2005; Galbreath 2008).

The resource-based view states that the firm can survive in competition, if it is capable of achieving competitive advantage by resources that are valuable, rare, inimitable, and non-substitutable, to put it short, VRIN attribute resources. Resources can be defined as including assets, capabilities, processes, and knowledge that enable the company to implement strategies to improve efficiency and effectiveness in relation to the market needs. (Galbreath 2005; Barney 1991) Therefore, RBV basically explores the differences between competing firms through competitiveness of resource configurations, where the basic metric for

effectiveness of a configuration is determined by its capability to create sustained competitive advantage. The focus of interest in RBV is in explaining the linkage between a firm’s competitiveness, resources, and capabilities. The main conclusions of the characteristics of theories are summarized in Table 2.

Table 2 Overview to comprehensive theoretical assumptions of TCE and RBV (Tsang 2000; Barney 1991; Rhiordan & Williamsom 1985; Galbreath 2008)

	TCE	RBV
<i>Basic nature</i>	Allocation of resources over boundaries of the firm.	Recognizing and collecting valuable resource configuration.
<i>Behavioural assumptions</i>	Opportunism and bounded rationality in inter-firm relationships.	Bounded rationality to value and asymmetries in knowledge.
<i>Objective</i>	Achieving cost efficiency through governance structures.	Increasing long-term value and achieving competitive advantage by developing and exploiting resources
<i>Management regime</i>	Coordinating and developing production within the firm and within the value chain.	Identifying and exploiting attractive strategic options or production enhancements.
<i>Constraints on strategic options</i>	Asset specificity and small numbers of bargaining in a supplying industry.	Immobility, causality, and path dependence of resources.
<i>Limit of organization</i>	Loss of top management control and increased managerial opportunism in large organizations.	Managerial diseconomies owing to distinct management regimes and capabilities.

2.2 Competitive landscapes

The research takes a look at the market competition to analyze the phenomena of value chain vertical disintegration. The analysis of competition begins by definition of competitive landscapes of industries, the impacts of which are analyzed at the level of markets and industries and at the level of activities. The analysis of activities explains the influence of market competition on the internal structure of a firm by capability differences between firms within the value networks.

The concept of competition is used by a large number of microeconomists in a variety of ways. Most usages reflect one of the three broad research traditions in microeconomics: industrial organization economics (structural competition) (Bain 1956; Bain 1959; Mason 1939), Chamberlinian economics (Chamberlin 1933) (resource-

based competition), and Schumpeterian economics (Nelson & Winter 1982; Schumpeter 1934) (revolutionary; see Figure 2).

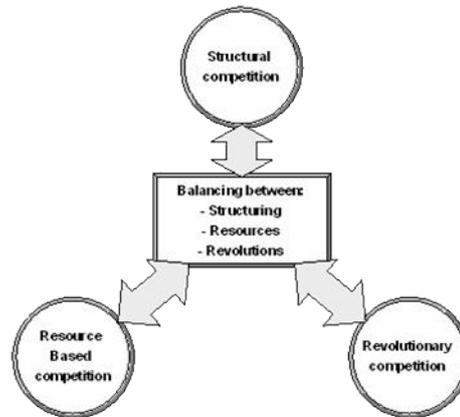


Figure 2 Barney's (1986) competitive landscapes.

In the model of industrial organization economics of competition, the return to firms is determined by the structure of the industry and markets. The functionality of the markets defines the boundaries of a firm. The key determinants of an industry's structure include the existence and value of barriers to entry, the number and relative size of firms, the existence and degree of product differentiation, and the overall elasticity of demand. The industrial organization model was developed originally to assist government policy makers in the USA in formulating economic policy. Therefore the role of regulation has received very little attention.

Some of the key differences between firms that may lead to differences in the performance of firm include technical know-how, reputation, brand awareness, and the ability of managers to work together (Chamberlin 1933). Chamberlin was able to show that industries characterized by monopolistic competition will also be characterized by competitive equilibrium in which there will be a distribution of economic returns to firms. This means, therefore, that these industries can obtain sustained periods of superior financial performance by exploiting their unique assets and capabilities. The differences between the skills and abilities, which are controlled by firms, can lead to differences in returns from implementing strategies. Therefore, it is a necessity for a firm to find and choose strategies, which most completely exploit their

individuality and uniqueness (Barney 1986). This insight is later embedded in the writings of the strategy theorists. The theory was based on the idea that competitive sustainable advantage is achieved by valuable, rare, non-imitable, and non-transferable, sustainable resources; this theory is known as the resource-based view (RBV). The importance of knowledge was soon recognized and RBV was developed towards a knowledge-based view, where competitive advantage is achieved by innovative combinations of knowledge and resources (Cyert & March 1992; Foss 2005; Nelson & Winter 1982; Penrose 1959; Prahalad & Hamel 1990; Teece 2003; Teece et al. 1997; Wernerfelt 1984).

Both IO economics and Chamberlinian competition models presume a level of stability in the competitive dynamics. Schumpeterian competition differs from the other models by instability and unpredictability. Schumpeter came to focus on major revolutionary technological and product market shifts. This meant that in the long run, price and other competitive actions of firms within a relatively stable industry became less important. Schumpeter (1950) did not suggest that competition did not exist, but rather that it was of secondary importance when describing the evolution of an economy through history. Schumpeter's concept "carrying out new combinations" identified five cases: "(1) The introduction of a new good, (2) the introduction of a new method of production, (3) the opening of a new market, (4) the opening of a new source of supply, and (5) the carrying out of the new organization of any industry, like the creation of a monopoly position" (Schumpeter 1934).

Revolutionary innovations in product, market, or technology can only partly be anticipated by firms. In Schumpeterian competition setting, when major innovations do appear, their ultimate impact may not be known for some time, at which point it may be too late for older firms with older technologies and skills to compete in a new market that requires new skills (Barney 1986). Despite some research reports (Bergman et al. 2005; Hamel 2000; Laaksonen 2005; Nelson & Winter

1982) the implications of Schumpeterian competition remain relatively unexplored in strategy research.

2.3 Internal structure of the firm

The previous section analyzed the influence of competition and industry evolution from the perspective of interrelationships between competing firms and enlightened possible evolutionary paths of the businesses. The following discussion turns the focus from the industry level to the firm-level boundary decisions and endeavours to find explanations for outsourcing from the market competition. The unit of analysis at the firm level is activity. Activities are analyzed from the viewpoint of the requisite capabilities comparing firm's performance level with the best available performance by suppliers.

Changing competitive environment has an impact on the company's internal structure and boundary decisions because of the heterogeneous capability distribution along the value chains. Activities of the firm may be distributed more than one area of the competitive models, because changes do not occur regularly between firms or even activities within the firm (see Figure 3). This can be understood when a company's capabilities are considered from the perspective of short term decision making (Jacobides & Winter, 2005). The first fundamental argument is that "productive capabilities are heterogeneously distributed and immobile between actors among the value creation system" (Jacobides & Winter 2005, Barney 1991). The main reason for this is that the productive capabilities rest on specific knowledge about "how to do things", which is typically a path, depending on and strongly related to the learning process. Because of capability differences, managerial styles and competition faced by a single activity vary between parts of the value chain even if these differences are inside the company's boundaries. That leads us to the second fundamental argument of a company's architecture, defined by Jacobides and Winter (2005) as follows; "A company that is deciding whether it keeps an activity integrated or not compares its current capabilities with those of other firms in an industry." Since the company's own productive capabilities

are lower than the potential partner can offer, using the market option is a profitable choice (Jacobides and Winter 2005).

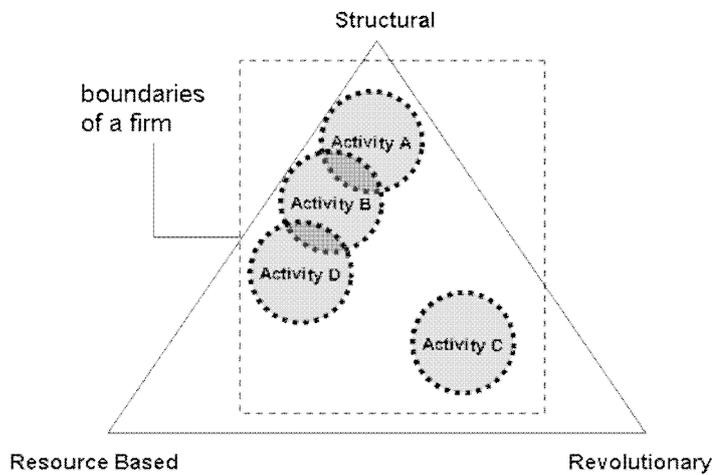


Figure 3 Deviation of competitive regimes in a company

Divergence between departments can occur in a situation, where capabilities in the company's boundaries are strongly deviated (activities A, B, and D vs. C) because of differentiated goal setting, competing capabilities, or lack of synergies. Divergence can be for instance a result of the transformed strategic objectives of the company. In some cases, determining optimal governance structure between Market, Hybrid, or Firm becomes challenging, if the diverged activity partially, but not independently, enables sustaining long-term competitiveness in an industry (Jacobides & Billinger 2006).

Value chain disintegration, that is, moving an activity outside the firm's boundaries (see Figure 4), enables the company to achieve gains from trade and specialization in some cases (Jacobides & Billinger 2006; Jacobides 2005). According to the resource-based view, firms build their valuable and unique resource combinations to support competitive advantage by resources which they are able to manage. Therefore, it is not a necessity for a firm to own all the resources, which are critical to value creation in a specific business model, and it may optionally outsource the rest (Espino-Rodrigues & Padrón-Robaina 2006). Redesigning or changing the vertical architecture corresponds to changing the governance mode of a resource or resources, as it is called

in TCE, which focuses on the performance impacts of the selection between governance modes. Changing the vertical architecture can be a profitable choice in these cases, because it improves efficiency and effectiveness, enables effective learning processes and adds to choices for resource and capital allocation (Jacobides & Billinger 2006); (see Figure 4). The benefits of a new architecture are the following: (1) more effective operations through monitoring and benchmarking along the value chain, (2) fostered strategic capabilities and intensified rate of innovations through more open structure, and (3) better resource allocation and increased potential of growth, while the new architecture provides greater transparency and accountability (Jacobides & Billinger 2006). The benefits and risks of outsourcing are discussed in detail later in this study.

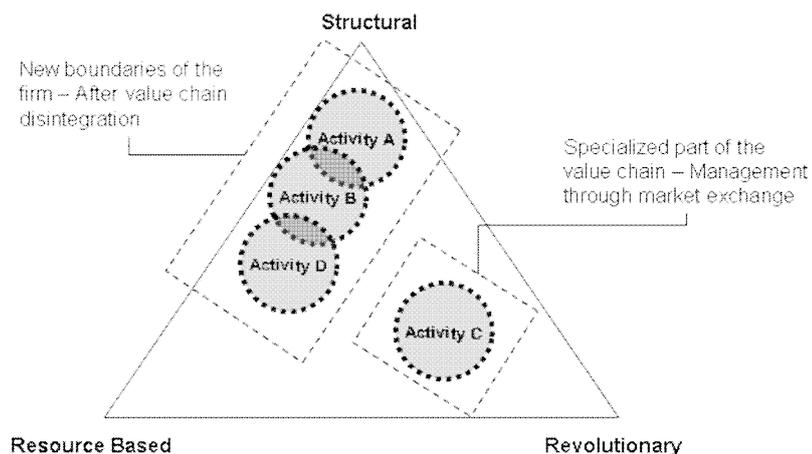


Figure 4 Renewed architecture of the firm's boundaries based on specialized capabilities.

To understand how renewing architecture influences a firm's efficiency, it is necessary to discuss the nature of the markets. Jacobides and Winter (2005) determine markets as a thin interface between vertical stages, where the products or services are purchased from the other firms. Their basic assumption is that a market does not produce anything; it is only an administrative framework where production abilities of firms are signalled for buyers in terms of price and quality. The markets enable comparison of a company's own abilities with others; this information is utilized when "make or buy" decisions are made and deals are prepared.

Otherwise, the role of transaction costs is to ease or reject disintegration, when an activity is planned to be purchased from specialized firms. The potential gains from specialization and trade should be compared with the levels of transaction costs (Jacobides & Winter, 2005). Thus, in the short term, disintegration decisions are made within the boundaries of the following logic, if firms differ from each other.

Disintegration is a profitable choice, if

$$p_i - B_i < p_v - TC_{iv}$$

Where

p_i = productive efficiency of a company

B_i = bureaucratic costs of integration and cost of muted incentives

p_v = productivity of a potential supplier

TC_{iv} = estimated transaction costs between a company and a supplier

On the other hand, the logic explains the nature of the opposite direction of the value chain development. Firms will integrate if the costs of using markets are higher than the estimated gains from trade. (Jacobides & Hitt 2005).

The analysis shows that there are three attributes which affect the competition in the industry in the short term: (1) productive capabilities, (2) internal capabilities to govern an activity, and (3) capabilities to govern transactions. In the literature, productive capabilities and their distribution along the value chain have been shown to have greatest influence on the vertical architectures (Jacobides & Hitt, 2005). If it is assumed that there is a vertical interface between the stages of the value chain, that interface determines the rules for the vertical system, and in the long term, the interface connects the value chain stages so that the transaction costs are minimized. On the other hand, the firms that have superior productive capabilities compared with the average level of industry determine the market framework, rules and functions; this is due to the decisive influence of the production capabilities on the architecture decisions (Jacobides & Hitt, 2005).

3 VALUE CHAIN DISINTEGRATION

3.1 Locus of the strategic change

The forces that shape industry competition and have an impact on the existing position of firms in an industry appear in the following categories: industry's internal competition for positions, the power of suppliers and customers, and the threat of new entrants and substitute products (i.e. products and services) or production technologies (see Figure 5 a). The firms in the industry cope continuously with these forces by defending themselves against threats or acting on the competitive forces. Therefore, the goal for business management is to recognize the strongest competitive forces of the industry and find a position for the company, where the firm can most efficiently utilize its strengths and defend against weaknesses or influence surrounding competition (Porter 1979; Barney & Hesterly 2006). Understanding the nature of the strategic change can enable the firm to increase profitability by selecting an appropriate strategy for a new competitive balance, if competitors do not recognize the same opportunity at the same time (Porter 1979). Additionally, the firm should be able to adapt its functions and knowledge basis to the changed environment.

Porter (1979) states that the evolution has an impact on the sources of competitive forces, which influence the locus of change, and thus, this evolution is more important to be recognized from aspect of a single firm than the general trends of an industry. The analysis, however, lacks connection between an industry change and the primary sources of the competitive forces (See Figure 5 b and c). The importance of the horizontal forces in the model (industry competition, power of customers and suppliers) increases in times of competitive stability. Similarly, the importance of vertical forces (threat of new entrants and substitutes) increases in time of industry transformation thereby increasing the uncertainty in industries. In times of stability, firms should concentrate on incremental improvements in their business model, and in times of technological breakthroughs, on strategic innovation. In a rapidly changing environment, innovation, decision-making, and the successful

implementation of strategic options can be held as a key to sustainable competitive edge. By breaking down the industry competition onto the business model level, the competitive landscape becomes more complicated (Laaksonen 2005).

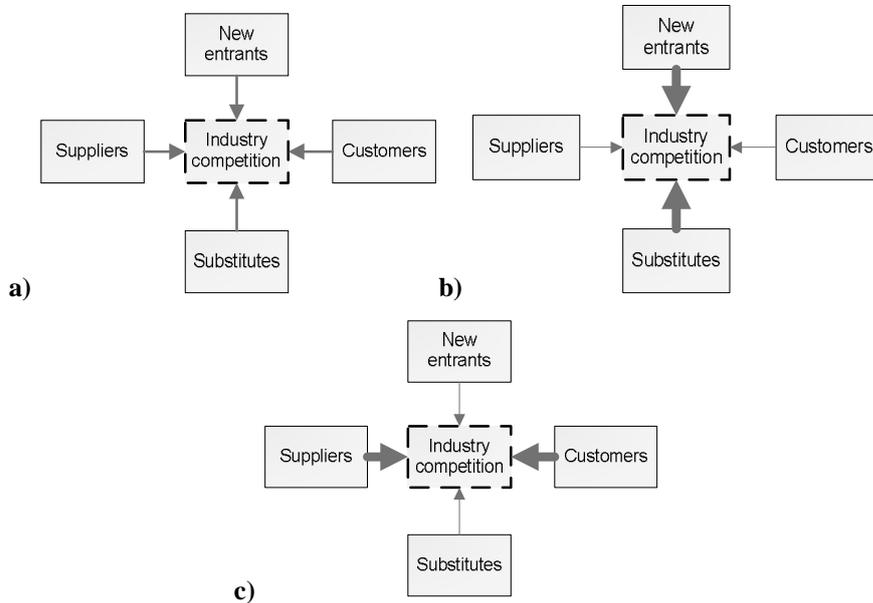


Figure 5 Sources of competitive forces of an industry a) Porter's general case, b) Competitive forces at the time of the industry transformation and c) Competitive forces at the time of stability (Porter 1979; Laaksonen 2005)

Similarly as in the case of an emerging market, especially during rapid changes, it becomes harder for a firm to sustain operational advantages because of decreasing significance of structural factors of competition on an era of change (Galbreath 2008; Laaksonen 2005). If a company cannot exceed the average operational efficiency in the industry, the only way is to gain a cost advantage or price premium by competing in a distinctive way, i.e. “doing things differently from competitors, in a way that delivers a unique type of value to customers”. (Laaksonen 2005). Galbreath (2008) points out that if the operation environment has changed, or it is under ongoing changes, the firm has to focus on developing their capabilities rather than manipulate structural forces of competition to achieve performance. Such a change can be a result of transformation of customer value attributes, which, on the one hand, determine valuable resource portfolios and, on the other hand, enable creation of completely new business models that are located between stages of an existing value chain (Laaksonen 2005).

In order to understand the changes taking place in the industry of a firm, it would be important to understand the changes taking place in the market where the firm's customer operates (Laaksonen 2005). The previous highlights the importance of precise understanding about the end-user needs (Laaksonen 2005). Thus, the behaviour of the end-customer of a value chain determines, finally, the nature and magnitude of change, which set up constraints for valuable resource configuration and capabilities. Basically, the change of customer needs have two forms: *Incremental*, when competition between existing business models increases and *Strategic*, when the contents and structure of customer needs change radically and new competition occurs between new, recently emerged business models (Laaksonen 2005).

The traditional view to competition relies on an assumption of quite stable customer requirements and recognizable competitive factors. In that case, the competition between existing business models leads into imitation, incremental improvements, and intensified competition (Laaksonen 2005; Porter 1979). The operative strategy of firms focuses on improved efficiency through cost control and volumes, where "fat markets" define the prices. The focus is on efficiency of purchasing raw materials, services and goods, customer service, and delivery and production processes. Usual means of implementation are better acquisition of raw materials and services, replacement of investments geographically closer to markets or cheap labour, pricing of products, sales volumes, and customer loyalty (Laaksonen 2005). In general, optional re-positioning strategies are product differentiation, control over supply chain, specialization, and consolidation (see Figure 6 a, b c, and d) (Porter 1979; Barney & Hesterly 2006).

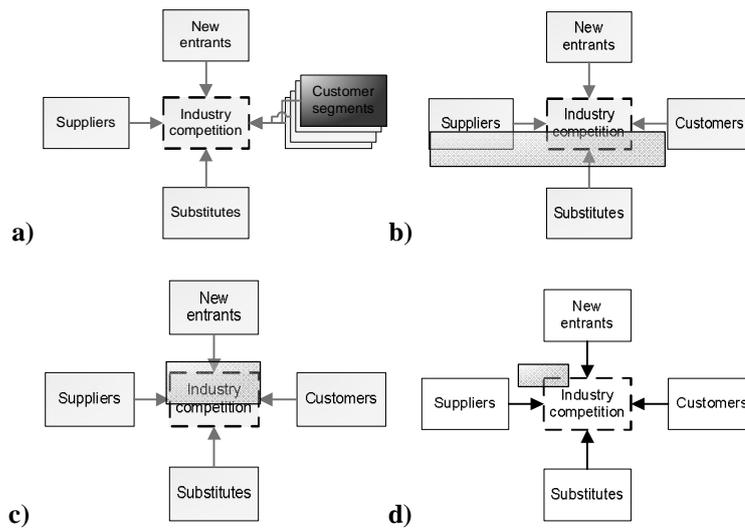


Figure 6 Re-positioning options of a firm by Porter (the goals of the strategies are indicated by red colour): a) product differentiation, b) control over supply chain, c) consolidation and d) specialization (Porter 1979; Barney & Hesterly 2006).

Changes in the customer needs, in some situations, might enable radical transformation of the competition in an industry, which brings out a new competitive force, *complementors*. Complementors are firms, the products or capabilities of which combined with the existing products of a firm enable a higher customer value than the existing products alone (Barney & Hesterly 2006; Harrison et al 2001; Ireland et al. 2002; King et al. 2003).

Exploiting the opportunities opened by the complement products requires rethinking the business structures and positions of business models, because the industry's external complementors bring new practises to the established field, or the complementor is a current competitor, which may remarkably hinder the cooperation (See Figure 7) (Barney & Hesterly 2006). Hence, in the new competition, the firm's present business model competes with other external business models, but also with new internally innovated models (Laaksonen 2005). According to Laaksonen, 2005, the business model represents the structure of this resource configuration. In such a situation of competitive change, the significance of the competencies to renew the firm's business by innovating new radical business models increases.

Such competencies are dynamic capabilities, which support developing and sustaining long-term competitive advantage during industry transformation. Broadly, dynamic capabilities include skills to inspire co-operation with the strategic partners and to coach the firm's own personnel to rethink and renew business models through their tacit knowledge to compete with other business models within industries or even to create new industries (Laaksonen 2005). New business models can also reform industries by integrating existing profit sources by splitting existing models into smaller entities (Laaksonen 2005). RBV states that the long-term competitive advantage lies on the resource configurations that the firms are able to build, by using dynamic capabilities, for adapting its resources and capabilities to correspond the new requirements (Laaksonen 2005; Wernerfelt 1984). However, when uncertainties and instability in markets occurs, decision-making in firms should concentrate on process improvements driven by emerging customer needs and exploiting arisen opportunities in an appropriate way from the perspective of long-term competitiveness. Understanding these change forces becomes most important for maintaining strategic flexibility (Laaksonen 2005).

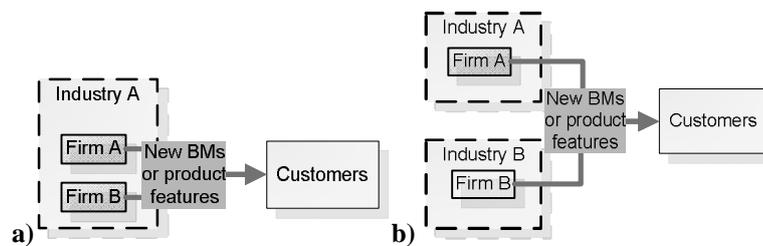


Figure 7 Sources of capability complementarities by Barney & Hesterly (2006). a) Complement capabilities of current competitors, b) complement capabilities by intersecting industries, technology convergence or convergence of industries etc.

By combining the impacts of changing customer requirements, the occurrence of new complementarities, and the differences in dynamic capabilities between firms in the industries, it is possible to define the emergence of two distinct cases, that is, intermediate downstream and upstream business models (See Figure 8a and b). The downstream and upstream business models are new business activities between the stages of the current value chain that emerge as a result of the parallel

transformation of customer requirements, technological substitutes, or valuable product enhancements and inability to cope with the changes by incremental changes of existing business models. Therefore, downstream and upstream business models are always radical structural innovations that exploit multiple sources of knowledge, resources, and capabilities, and combine these by dynamic capabilities, and which have irreversible impacts on the prevailing practices of an industry.

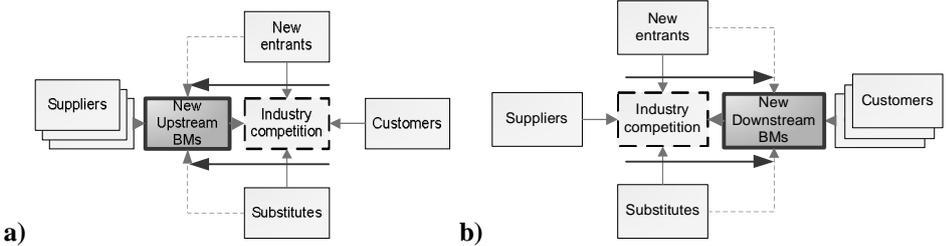


Figure 8 Emergence of new business models through changing customer requirements and complementors.

3.2 RBV and TCE explanations for emerging intermediate markets

Market creation, transaction costs, capability gains, and transforming competitive dynamics in business branch are closely related to outsourcing. These are very critical factors when determining and explaining conditions on when and why new markets emerge (Jacobides 2005). In the literature, key explanations for value chain vertical disintegration (i.e. ~outsourcing) are two economic theories, namely the transaction costs economics (TCE) and the resource-based view (RBV). Since the end of the 1990s, the discussion around these comprehensive theoretical themes has arisen again with a renewed mindset. In the literature, TCE and RBV have been seen as complements and partly overlapping theories (Holcomb & Hitt 2006). The previous TCE literature recognizes the idea that TCE does not explain the whole nature of “make or buy” decisions, and it should therefore be complemented with capability and competition aspects (Blomqvist et al. 2002; Jacobides 2005; Jacobides & Billinger 2006; Holcomb & Hitt 2007; McIvor 2008). The differences between TCE and RBV approaches can be summed as follows. According to TCE, cooperation or market exchange occurs between two companies only if risks and costs of

governing transactions are minimized in relation to industry wide level. RBV states, however, that firms share capabilities and risks in order to stimulate growth and to build competitive advantage (Holcomb & Hitt 2007).

A fundamental question is related to a firm's resource portfolio development, the aim of which is to support building of competitive advantage (Holcomb & Hitt 2007; McIvor 2008). This approach has been built on a twofold statement: On the one hand, the boundary decision depends not only on conditions surrounding a single transaction but also on the resource portfolio and the governance context that it enables (Holcomb & Hitt 2007). Secondly, once disintegration has occurred, the nature of the industry and its competitive dynamics are radically and irreversibly transformed. This change affects the whole industry, even a player that has decided to stay in its original governance mode (Jacobides 2005). Thus, observation of future boundary decisions should be turned from the analysis of condition of a single transaction to the analysis of distribution of productive capabilities, where gains from trade have been taken in account (Jacobides & Winter 2005).

Jacobides (2005) presents a model for creation of new markets, which is based on the implications about integration of TCE and RBV. The model has been divided into four parts: drivers, motivating factors, enabling process, and necessary conditions (see Figure 9). Thus, the mechanics combines the motivating factors of RBV with the constraints of the market governance to an integrated process. The framework should be understood as a description of market emergence at an industry level rather than as a single firm's make or buy decision.

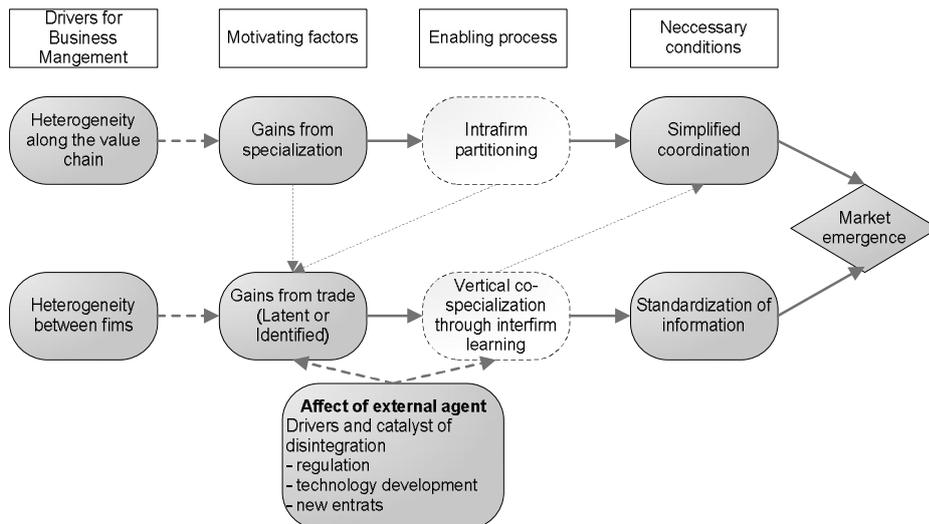


Figure 9 Mechanism of vertical disintegration and market creation (Jacobides 2005).

3.2.1 Drivers and motivating factors

Fundamentally, there are two ultimate motivating factors for value chain disintegration. Gains from specialization occur, when managerial styles or the knowledge base vary in each part of the value chain (heterogeneity along the value chain) (Jacobides 2005). In other words, management of the company becomes complex and processes inefficient if the company has integrated many vertical stages to one organizational unit and, thus, holds too many different competencies. Transferring activities to independent suppliers would solve inefficiency problems (Hameri & Paatela, 2005). Latent or identified gains from trade emerge, when there are capability differences between firms or when a firm can add value only in a specific part of the value chain, or the growth potential is different in each segment. Transacting with other firms will be an attractive prospect (=heterogeneity between firms).

3.2.2 Enabling process

The enabling process is put in motion by motivators. The process takes place in two separate parts, intrafirm partitioning and interfirm cospecialization. The result of these two processes is determined by the necessary conditions and the institutional background for market emergence. The aim of intrafirm partitioning is to create clear administrative separations in value chain, which enables effective

monitoring and simplifies coordinating, when heterogeneity along the value chain occurs (Jacobides 2005). The intrafirm partitioning leads to autonomous subunits in the organization, which meet similar competition as outside firms in the value chain. The aim of the cospecialization process is to find ways to reduce transaction costs and define the methods for exchange over the firm boundaries (Jacobides 2005). The interfirm cospecialization can be described as a learning process, where two firms find capability complements from each other and adapt their organization to special purposes, which offers specific gains for both parties (Jacobides 2005). One example of this kind of behaviour is expanding scale of production by purchasing parts of production outside. The learning process also influences the management process and decreases function coordination problems, which fuels the partitioning process.

3.2.3 External agents

External agents have interest to participate in the development of industry. Technology providers, potential new entrants, or regulators are examples of external agents. The role of external agents is to be catalysts of the disintegration process by turning latent gains to real gains or savings (Jacobides 2005).

3.2.4 Necessary conditions

Finding the necessary conditions is the final point on the path to market emergence. The necessary conditions are here defined as coordination simplification and information standardization, which have to be met before a market emerges (Jacobides 2005). These conditions have to be accepted by both contracting parties before a transaction is closed and a new market emerges. Simplified coordination reduces interdependencies in the value chain and allows parts of production to be separated. In other words, simplified coordination enables management of the part of value chain similarly as modularized production. The interaction between stages is minimized and risk sharing is at an acceptable level, which decreases the required negotiation actions between parties. Market

emergence is impossible if this condition is not met (Jacobides 2005). Information standardization decreases barriers between transacting parties and makes transaction universally understandable. Standardized information enables transactors to understand, describe, and monitor the exchange. Thus, it determines rules for partnership and increases transparency of the agreement (Jacobides 2005). Standardization of the market information can be reached first in simple or low-risk functions.

3.2.5 Market emergence

Market emergence is possible only if both simplified coordination and standardized information is reached. Additionally, there is demand for cost savings in every disintegration decision. Jacobides and Winter (2005) define short-term disintegration decision model as follows:

Short-term determination of vertical scope:

If capabilities are dissimilar along value chain

- Then there are latent gains from trade across the firm boundaries
- Then reduction of transaction costs will lead to disintegration of a value chain

If capabilities are similar along value chain

- Then there are no latent gains from trade across the firm boundaries
- Then reduction of transaction costs will not lead to disintegration of a value chain

A preliminary decision model for outsourcing can be defined based on the above rules and theory about competitive differences between functions (see Figure 10). Capability differences are drivers for a change in governance structures and, hence, they are a source of disintegration of value chains. Disintegration of a value chain can take place only if the following conditions are met: the use of market option has to simplify coordination and offer benefits for management. Acquiring services from markets is possible only if an effective governance framework can be defined, which increases transacting risks. An effective market framework makes it possible to use a market option even though the market is immature; this also decreases transaction costs. Once the markets have emerged, competition will constantly shape the market framework, and the market interface will be formed by a method by

which the transaction costs are minimized. This offers a temporary optimum of cost efficiency. The total costs of purchasing are the definitive constraint before market option is attractive; every market action has to produce latent or identified benefits for customer.

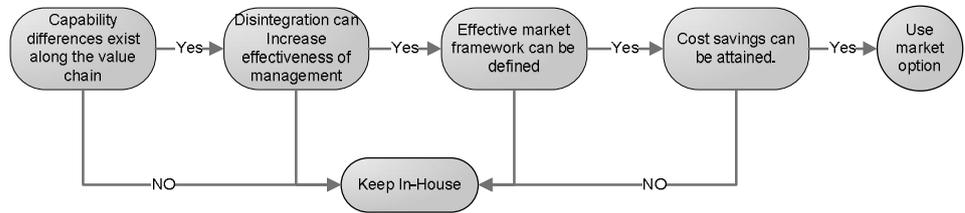


Figure 10 Constraints for market emergence

4 DEFINING OUTSOURCING STRATEGY

The implications of parallel examination of TCE and RBV are discussed in the following sections. The combined view enables definition of a two-dimensional framework for a company resources, expressing the strategic value and transferability of these resources (Blomqvist 2000; Arnold 200; Watratjakul 2005). Strategic outsourcing is analyzed in respect of recognized resource dimensions and categories, which is the background for the developed assessment model for outsourcing objects (Holcomb & Hitt 2007).

4.1 Dimensions of company resources

In this study, the transaction cost economics and the resource-based approach is applied to the analysis of resources and activities of a firm. The implications of applying the fundamental economic theories at an activity level are discussed in the following sections. The approach enables understanding the parallel occurrence of two dimensions of the firm resources; strategic value and complexity of using market options (Holcomb & Hitt 2007; McIvor 2008). Additionally, it can be defined third dimension, “relative capability position” of the firm, which indicates the firm’s capabilities to build superior performance in an activity (McIvor 2008). This study, however, focuses on the first two dimensions, whereas relative capability positions are not discussed in full. The description of the dimensions is carried out through three stages from TCE’s and RBV’s points of view and by combining previous viewpoints to the resource category model.

Transaction cost economics states that, first, a market will always offer the lowest costs of production of a good and, second, asset specificity is the key explanation of differences in transaction costs (Rhiordan & Williansom 1985). Asset specificity illustrates a resource’s general availability to be used on generic applications (Holcomb & Hitt 2007). A specific asset is tied to business processes of a firm and it is valuable in its special purpose, but outside the customer’s organization or a specific market segment, the asset cannot be efficiently utilized and it constitutes

low market value for supplier (Watjatrakul 2005). Opportunism is not a critical issue when contracting low specific resources, which can be defined in detail and the results quite well forecast. The specificity increases complexity of contracting, because managing of a transaction will be more complicated and inefficiencies will occur because of rising governance costs, probable production issues, and combined effects of them (Holcomb & Hitt 2007; Rhiordan & Williansom 1985).

In this approach, asset specificity is utilized as an elemental measure of the transferability of resources. Specificity has several serious implications to the cooperation principles. Supplier's commitment to specific investments extends bilateral dependencies between transacting parties, which impacts both the risk of opportunism and, partially, gaining incentives during partnership. The gains from the firm's perspective can be achieved, if collaboration in investments to specific assets creates positive incentives for bilateral cooperation, which reduces the risk of opportunism. Such gains are created through mutual learning about the functionality of marketplace and enables growth options for a supplier, if equal customer needs emerge widely in an industry. Opportunism occurs, if bargaining power glides toward suppliers. Such conditions decrease incentives to share efficiency or open opportunities to neglect duties and, thereby, extend complexity of monitoring (Holcomb & Hitt 2007; Porter 1979). On the other hand, the specific assets can be remarkable risks for a supplier, which commits itself to the development of customer-specific resources. The commitment ties the supplier to a customer-dependent path after investment, if the investment lacks generic availability. Thus, the bilateral dependence would seriously harm a supplier in particular market conditions, where commitment ties the supplier to regressive segments, if competitors are able to strike more valuable options at the same time (Watjatrakul 2005). Based on the above, attractiveness of partnership is related to the level of positive bilateral dependence from the supplier's and the firm's points of views, and on the other hand, applicability of assets to generic business models, which could offer profit expansions in new market segments.

The firm can use market option and move risks of an investment to a supplier even though asset specificity occurs. Again, the constraints for the activity are mutual gains through learning and capability complementarities. The challenges of using a market option under circumstances of asset specificity are: (1) finding a partner with right capabilities to carry out development of the function, (2) developing appropriate processes for assuring efficient pricing, measuring efficiency, and monitoring the agreed working methods, and (3) selecting right governance procedures for purchased functions. Using a market option can lead also to lock-in problems, if resources are rare and markets are inefficient. A lock-in risk increases also in those particular conditions, where an activity has complex dependencies with other activities within the firm.

The characteristics of specific assets and the impact of asset specificity on the potential of beneficial cooperation were discussed above. In this study, the aspects of the TCE are understood as general constraints for resource transferability, which, on the one hand, hinder using market options, but, on the other hand, open new attractive markets for supplier. Next, the objective is to illustrate general dimensions (Table 3) for evaluating transacting opportunities. The transaction costs and benefits are a result of existing fit of resources to customer requirements, differences in capabilities to learn and develop organization by appropriate way, cooperation capabilities, and functionality of the existing market framework, and competition in a supplying industry (Blomqvist et al., 2000; Jacobides, 2005). According to Blomqvist et al. (2000), the analysis of transaction costs and benefits is divided into static and dynamic ones. The dynamic transaction costs and benefits refer to organizational learning within the firm or between transacting parties, and adaptability of business models along with industry evolution. The static view of the transaction describes traditional make-or-buy problem, where transaction costs occurs because of both a market's inefficiencies and inabilities to detect and employ effective management regimes within the firm.

Table 3 Resource attributes by the TCT adapted from (Blomqvist et al. 2000; Jacobides 2005)

Definition	
Bdt	<i>Dynamic transaction benefits</i> are related to the ability to exploit economies of scale, creation of incentives for suppliers, and increased flexibility of operations. They are also generated, if using market option has positive influences on the development of capability building mechanism.
Bdm	<i>Dynamic management benefits</i> occur, if a specialized capability enables creation of temporary or sustained improvements to a firm's competitive position in a market segment by hierarchy option. Thus, the sources of benefits are the ability to exploit monopoly power, asymmetric knowledge, economies of scope, and cumulative tacit know-how when facing competence-enhancing innovations.
Cdt	<i>Dynamic transaction costs</i> are related to the contracting and learning process with the providers. Thus, the costs correlate with the strategic importance and complexity or specificity of an outsourced activity.
Cst	<i>Static transaction costs</i> occur when market competition is imperfect and its functionality is low, because of few available partners, high asset specificity, inability to solve coordination problems or reach standardized information, or complicated causalities within the assets or innovations. Thus, the risk of opportunism is high under these conditions, which increases monitoring costs of outsourced activity.
Cdm	<i>Dynamic management costs</i> relate to the costs of persuading, negotiating, and teaching within the firm when a new capability has to be generated. It also includes the inability to cope with radical uncertainty. These are related to heterogeneity between firms, which creates differences in the capability basis and, thus, development gaps and investments.
Csm	<i>Static management costs</i> are related to the costs of maintaining large organizations, which face management issues, if the capabilities are diverged and the heterogeneity along the value chain occurs. Such a condition leads to complicated monitoring of large bureaucracy and high sunk R&D costs.

The objective of the dynamic view to transactions is to tie up traditional market-driven constrains for cooperation with a long-term capability development process and strategic aspects of a resource. This way, the analysis logic leads to observation of another point of view to the company's resources, that is, strategic importance. The analysis of strategic dimensions is based on principles of the resource-based view.

Resources can be defined as assets, capabilities, processes, and knowledge that enable implementing strategies to improve efficiency and effectiveness in relation to market needs. At the same time, resources are imperfectly transferable and heterogeneously distributed across the firm. Due to framework conditions of imperfect mobility of resources, the management should pay attention to processes that enforce creation of new valuable resource configurations, which support achieving ultimate

performance in terms of customer value attributes (Barney, 1991). Immobility of resources gets an important role in the era of industry transformation, when the value of existing products, activities, and productive capabilities radically decreases. In that case, the essential question for management is, “How do they build an effective approach for procuring valuable capabilities by utilizing both internal and external resource pools?”

One key element in observation of the strategic aspect of a resource is its relation to the concept of competitive advantage, which creates rather simple constraints for utilizing external value network, and, at the same time, steers the selection of appropriate governance models of an activity (Arnold 2000). A firm can attain competitive advantage when its returns are above the normal level of the industry and the firm can sustain its existing resources. Resources will create sustained competitive advantage by enabling to exploit opportunities from markets and by neutralizing threats from competitors (Barney, 1991). Based on the previous discussion about resources, it can be shown that there are two types of resources in the companies; strategic resources and valuable resources. Strategic resources enable the company to sustain competitive advantage, if they are valuable, rare, imperfectly imitable, and non-substitutable (called VRIN resources). Thus, strategic resources enable the firm to implement strategies that are hard to be imitated by competitors. Valuable resources, on the other hand, have value in the business, but they might be commonly purchasable from markets or they are not directly linked with the core business strategy. Thus, valuable resources cannot independently sustain long-term competitive advantage (Barney, 1991). The basic definition of the VRIN attributes is presented below in Table 4.

Table 4 Resource attributes by RBV – definition of the VRIN attributes for resources (Barney 1991)

Definition	
<i>Valuable,</i>	A resource has value if it enables the firm to exploit opportunities, implement strategies or neutralize threats from external environment. The valuable resource has to be connected to the company’s existence; thus, it separates strategic resources from the valuable resources.
<i>Rare,</i>	A resource is rare if it is not commonly available and, thus, the existing or potential competitors are not able to utilize the resource in a similar way for the same purpose. Rare resources enable the firm to implement unique strategies leading a company to a higher performance than the industry average.
<i>Imperfectly imitable,</i>	A resource is imperfectly imitable, (i) for historical reasons for the development paths of capabilities, because of (ii) complex causalities between the activities, or (iii) a complex social context of the developing process of the capabilities.
<i>No equivalent substitutes,</i>	A resource is non-substitutable, if competitors, existing or potential, are not able to develop and utilize a resource or bundle of resources in the same way for the same purposes or implementing strategies.

Based on the previous discussion, the resources of a company have two dimensions, viz. (i) *strategic value*, defined by the resource-based approach and (ii) *transferability or general applicability*, based on the traditional transaction cost economics (Figure 11). Both two dimensions give guidance for a firm boundary decision and constraints to use market option. The strategic value of a resource determines the impact of a resource or activity on a firm’s competitiveness (VRIN resource or not), and it gives constraints on the boundary decision from the perspective of value creation potential. Again, value creation refers to capabilities to create and sustain ultimate performance to meet the customer’s requirements. Transferability of a resource describes the value of the resource outside the company and its applicability in generic business models. Transferability sets constraints for potential outsourcing proposals from a service provider’s point of view. The resources with a high transferability and a low specificity are common resources for market potential outside the firm boundaries and can be purchased from markets with a low risk. Transferring high specific resources outside the existing boundaries may be challenging, for the previously discussed reasons. Markets can be mostly immature or there may be no markets at all, the risks being therefore high. However, outsourcing can be risky also from

vendors' point of view, if there is not high enough market potential for a specialized activity. As a consequence of identifying the dimensions of resources, four fundamental groups of different resources can be defined (Figure 11) (Watratjakul 2005). The common characteristics of resources in each group are determined below.

1. Low specificity non-strategic resources (LSNR):

LSNR are common resources and knowledge which are easy to imitate by competitors at a low cost. Therefore the resources cannot be a source of sustained competitive advantage of a firm (Watratjakul 2005). Supplying markets are mature, and there are established strong players, which creates high entry barriers and increases the level of rivalry in the industry. On the other hand, growth options are limited, because markets are near the saturation point and growth is radically declined.

2. Low specificity strategic resources (LSSR):

Resources support to sustain competitive advantage under specific conditions, but the *LSSR* resources cannot independently be a source of sustained competitive advantage. The strategic nature of these resources occurs, for example, when they are exploited in new resource combinations, which offer ultimate competitiveness for product features (Watratjakul 2005). Markets are available if the business concept offers improvements for the customer's long-term performance, but cooperation options should be assessed precisely, because of an intensive bilateral relationship between the service provider and a company.

3. High specificity non-strategic resources (HSNR):

Resources are designed for special purposes for a company or utilized in highly specific environments or market segments. Thus, the resources have only little value outside company (Watratjakul 2005). Potential to build generic business models by a service provider with these resources might be low. Markets are unattractive or they might offer latent growth options and first mover's advantage for a service provider or, on the other hand, they might be potential core businesses independently or parts of unrecognized business platforms for a company in the future. Therefore, the decision-making in outsourcing is complicated.

Development of a service market should be well understood for avoiding hold-up problems, and forecasts about the future customer needs should be scouted thoroughly because of the risk of outsourcing attractive options. It might be advantageous, if the company can sustain option to resumption of the activity or ascertain goal congruence with the service provider in different market conditions.

4. *High specificity strategic resources (HSSR):*

HSSR are essential for company's long-term success (~VRIN resources) (Watratjakul 2005). Moving the resources to a service provider would seriously harm further development and may direct the company to lose competitive advantage. Thus, there are no options for market development through outsourcing.

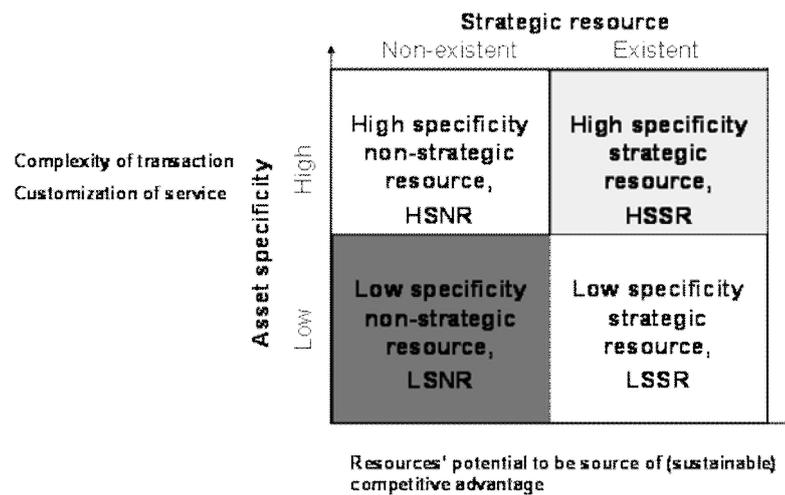


Figure 11 Resource categories of a firm (Watratjakul 2005)

General features of the resource categories are described above, which gives understanding about the structure of a firm's resource portfolio and, partially, explains why and where new markets presumably emerge. For understanding how the reorganization (i.e. outsourcing) options actually emerge, detailed characteristics of resource categories must be understood in terms of the economic theories, which is illustrated in Table 5.

Table 5 Specified characteristics of resource types, adapted from (Arnold 2000; Barney 1991; Watratjakul 2005)

	LSNR	HSNR	LSSR	HSSR
Combined theory	Generic resources, skills and knowledge that are transferable and have market potential outside the company.	Company specific capabilities, which have little value in external environment.	Generic resources, skills and knowledge that have value and also market potential outside the company	Company-specific capabilities that have a high value for business
TCT-RBV (Watratjakul, 2005)	Easy to imitate at low costs.	Thus, transferring resources can be challenging if not impossible	Imitating might be challenging, but possible.	Difficult to imitate because of ambiguity causal connections of success factors
	Do not allow to gain sustained competitive advantage	Do not allow to gain sustained competitive advantage	Enable company to gain sustained competitive advantage.	Enable company to gain sustained competitive advantage
(Arnold, 2000)	<i>disposable activities</i>	<i>core-distinct activities</i>	<i>core-close activities</i>	<i>the company core</i>
	Activities with general availability and applicability	Supporting activities with limited availability and applicability	Directly linked with core activities and value creation process of a company	Activities which are necessary a for a company's existence
RBV (Barney, 1991)	Valuable: No Rare: No Imperfectly imitable: No Non-substitutable: No	Valuable: No Rare: Yes Imperfectly imitable: (Yes) Non-substitutable: (Yes)	Valuable: Yes Rare: No Imperfectly imitable: (No) Non-substitutable: (No)	Valuable: Yes Rare: Yes Imperfectly imitable: Yes Non-substitutable: Yes

4.2 Arguments for strategic outsourcing by TCT and RBV

Formation of outsourcing decision begins typically by forming some opinion of the positive and negative effects of the action. The most common benefits and risks are gathered from empirical studies and presented in a structural form. To understand their nature and influencing mechanisms, risks and benefits should be mirrored with the theoretical background. Holcomb & Hitt (2007) have approached outsourcing from a wider angle, which exploits implications of TCE and RBV to partnership and resource management. The framework of Holcomb & Hitt offers dimensions for a detailed analysis of the outsourcing cases (see Figure 12), which are translated into a complete analyzing framework by combining the empirical findings of outsourcing cases with the dimensions of analysis. The analysis is performed at an accuracy of a single activity.

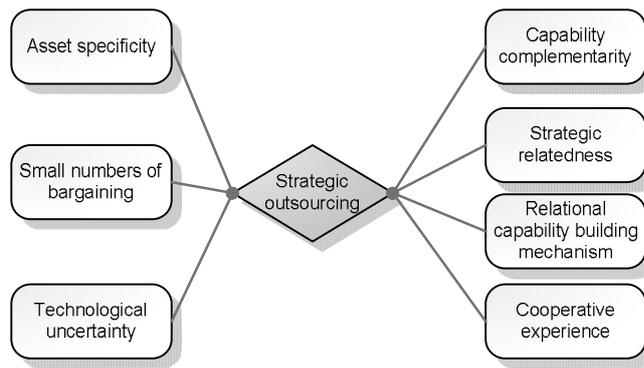


Figure 12 Dimensions for detailed analysis of the outsourcing cases (Holcomb & Hitt 2007)

TCE sets up constraints for a single decision transaction from the market risk perspective, but recognizes also a group of incentives for redesigning boundaries of the firm. Table 6 summarizes implications of TCE to outsourcing decisions by defining potential risks and benefits of asset specificity, small numbers of bargaining, and technological uncertainty.

Table 6 TCE's arguments for outsourcing (Holcomb & Hitt 2007)

	<i>Benefits</i>	<i>Risks</i>
<i>Asset specificity</i>	Collaboration in investments to specific assets can create positive incentives for bilateral cooperation, which reduces the risk of opportunism.	Asset specificity increases diseconomies, because of weak incentives and complexity of monitoring. Therefore, opportunities may occur and contracting becomes difficult.
<i>Small numbers of bargaining</i>	-	Small numbers of bargaining (~low market rivalry) increases monitoring costs and opportunistic behaviour of suppliers. Thus, in the conditions of low rivalry, the bargain power shifts to the supplier, which is not willing to share efficiency enhancements with customer.
<i>Technological uncertainty</i>	Specialized suppliers are able to adopt new technologies efficiently, because they can share development costs to multiple customers. A firm can share the development risk with the suppliers, if uncertainty increases. The benefits are achieved on moderate levels of uncertainty.	At a low level of uncertainty, outsourcing may not offer benefits, because monitoring of complex contracts is costly. The risk of opportunism increases at higher levels of uncertainty, due to increasing information asymmetry.

RBV emphasizes the strategic aspects of value creation and does not pay attention to detailed characteristics and impacts of a single transaction. The major question of RBV is, “How can a firm fortify its value creation capability”, which leads to the analysis of the potential profit booster within the firm and its value networks. Table 7 summarizes implications of RBV to the outsourcing decision, which characterize the influences of capability complementarity, strategic relatedness, relational capability building mechanism, and cooperative experience. These are summarized into profit gains.

Table 7 RBV's arguments for outsourcing (Holcomb & Hitt 2007)

<i>Influence</i>	
<i>Capability complementarity</i>	<p>Partner’s specialized capabilities can increase the firm’s performance and value creation potential. Besides, the complementary resources are especially hard to be imitated by competitors, because capabilities do not depend only on a single development path, but on unique linkages between partners. Concrete benefits may be:</p> <ul style="list-style-type: none"> - enhanced flexibility - increased innovative potential - increased quality
<i>Strategic relatedness</i>	<p><i>Goal congruency</i> (i.e. two firms share common objectives) reduces conflicts and supports cooperation, which affects the contracting and monitoring costs, because the risk of opportunism decreases and partners are willing to make additional resources.</p> <p>Common <i>knowledge-sharing routines</i> (i.e. similar knowledge structures, processes and system interfaces) enable increasing specialization and emergence of intermediate markets. Besides, it reinforces absorptive capacity and interorganizational learning.</p>
<i>Relational capability building mechanism</i>	<p>The mechanisms improve the firm’s ability to integrate, accumulate and leverage impacts of specialized capabilities, which enable the firm to exploit new opportunities and generate greater value over time.</p>
<i>Cooperative experience</i>	<p>Repeated ties between firms can provide access to information about the reliability and performance of the partner. These ties reduce information asymmetries, increase awareness of specialized capabilities/ firms and enable a basis of trust. The trust increases the proximity of firms, which reinforces other elements of value creation.</p>

Time horizon and direction of influence can be recognized, but not specifically characterized by TCE and RBV. Management accounting research offers more precise explanations for this issue. The benefits can be analyzed for instance by monetary-value-based or real option

approaches, on which the division of benefits depends. Real option theory divides benefits into the categories of operational and strategic gains. Operational benefits are available immediately after the implementation of the proposal (MacDougall & Pike 2003). Strategic benefits instead are potential future options, which enhance firms' competitive position in the future competition (MacDougall & Pike 2003). Monetary-value-based approaches, for example discounted free cash flow method, utilize a distinct grouping for benefits of investment proposals (Park & Park 2004). The value of the proposal can be divided into internal and external market factors. Internal benefits are linked to technology and company's processes, while external factors describe cash flow gains from markets, increased sales for example, and potential added value for customers (Park & Park 2004).

4.3 Modes of the customer-service provider relationship

The basis for strategic outsourcing in an organization can be considered to be an explanation for the development of the operational environment and the supplying markets. Outsourcing takes place with the existing functions and on the other hand a priori, i.e. for an activity, which will emerge as a result of radical changes (Holcomb & Hitt 2006). Based on the above, outsourcing can be categorized in two different groups: *Substitution-based outsourcing* and *capability enhancement-based outsourcing* (Holcomb & Hitt 2006).

Substitution-based outsourcing focuses on a firm's existing activities, which are aimed to be replaced by purchasing them from the markets. This outsourcing mode is enabled if the activity in hand can be executed equivalently by suppliers or within the firm. On the other hand, substitution-based outsourcing requires typically two critical characteristics: developed markets and low asset specificity to work properly (Holcomb & Hitt 2006; Rhiordan & Williansom 1985). Quality criteria and the purchase prices of an activity are assumed to be determined by market competition in these cases. Efficient market competition occurs only if the activity's state of development is mature and the operational environment stable (Holcomb & Hitt 2006). The

outsourced activity, thereby, can be considered standardized and the strategic importance low. Because of the previous requirements of the substitution-based outsourcing, the most significant decision factors are often improved performance and increased cost efficiency.

Capability-enhancement-based outsourcing occurs when a company exploits outsourcing for acquiring complement capabilities from intermediate markets (Espino-Rodríguez & Padrón-Robaina 2006; Holcomb & Hitt 2006; Bareney & Herterly 2006). Occasionally, the operational environment of the function transforms in these cases and keeping performance of the function at a sufficient level may require gathering new capabilities or investments. Therefore outsourcing of the functions may allow more productive resource allocation options compared with internal development of the requisite resources and capabilities (Gilley & Rasheed 2000; Espino-Rodríguez & Padrón-Robaina 2006). On the other hand, these functions may have more strategic value, and thereby outsourcing includes higher risks, which increase the complexity of the contracting (Holcomb & Hitt 2006). Outsourcing in undeveloped intermediate markets, which refers to the requirements of capability enhancement, includes considerable risks, because sufficient prices of activities are not determined by the market framework, and the lack of bargaining increases the risk for opportunistic behaviour of suppliers (Holcomb & Hitt 2006; Rhiordan & Williansom 1985). Because of unestablished competition, organizational differences in the emergent intermediate markets are typically remarkable, and the competitive advantage of the suppliers may be confined to specific substances (Holcomb & Hitt 2006). This highlights the importance of choosing the right vendor. The fact that the markets may offer far better capabilities to execute an activity than it could be achieved by the firm defines the objectives for capability-enhancement-based outsourcing (Holcomb & Hitt 2006). The benefits can be gathered through some new skills and information that can be carried by partners, for instance accessing new capabilities and, at same time, avoiding new

investments (Holcomb & Hitt 2006; Espino-Rodríguez & Padrón-Robaina 2006; Harrison et al. 2001; Ireland et al. 2002; King et al. 2003).

Based on the above, the demand for hierarchical management correlates with increasing uncertainty of market efficiency, depth of cooperation and intensity of information exchange, which can be linked with theoretical explanations of the dimensions of resources by RBV and TCE. As the resource specificity or strategic value raises, the risks of hold-up problems and opportunistic behaviour increase, which emphasises hierarchical management and decreases opportunities to gather benefits through outsourcing and vice versa (Arnold 2000; Rhioran & Williansom 1985; Holcomb & Hitt 2006). Figure 13 illustrates the phenomenon of previous interdependencies between asset specificity, markets, and strategic value of resources.

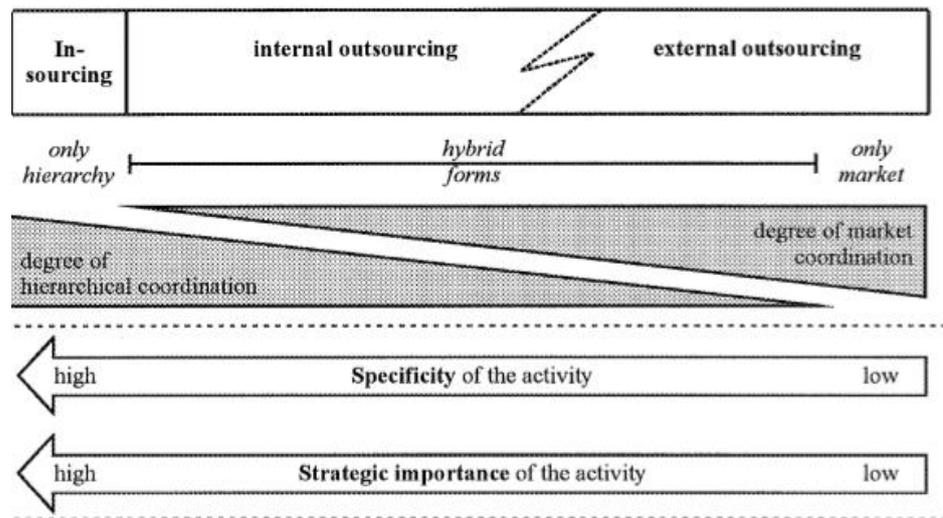


Figure 13 Selecting governance modes on the basis of asset specificity and strategic importance (Arnold, 2000).

The terms in-sourcing, internal outsourcing, and outsourcing refer to the ownership structure of the activity and cooperation modes between the firm and the external partner, which is illustrated in Figure 14. The activity is a part of firm's basic organization in *option in-sourcing*. The ownership may vary in *option internal outsourcing* in three ways: (1) the activity is separated from the basic organization to an independent unit, (2) the activity is moved to a daughter company, or (3) the activity is moved to a joint-venture. The option *external outsourcing* means that the

firm’s ownership to the activity has been cut and, thus, the management is executed through different contracts, which are determined by expected transaction risks (Arnold 2000). Formal, and possibly complex, agreements are required if the service markets are inefficient for sanctioning potential failures or if the service is complex.

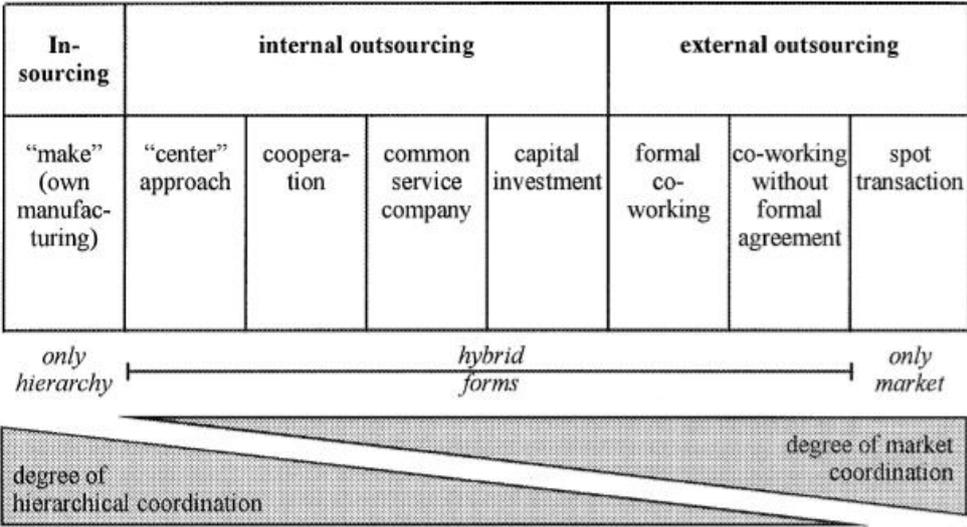


Figure 14 Relationship between cooperation modes and coordination modes (Arnold, 2000).

Combining the optional outsourcing regimes (Arnold, 2000, Holcomb & Hitt 2006) and the resource categories (Watratjakul 2005) makes it possible to forecast a firm’s potential outsourcing opportunities at an activity level and to determine the most efficient cooperation models for a specific activity (see Figure 15). The combined resource map illustrates optional structures of a firm with respect to the opportunities created by a hypothetical situation of perfect competition. According to the model, the firm should manage all standard resources (LSSR) through markets and hold the resource within firm boundaries only if it is highly specific or strategically essential. On the other hand, the framework has implications to the investment decision, during a change of an industry, or when changes are expected. The focus of development investment should be on the activities that have remarkable customer value in the future or on locations where market options are unavailable.

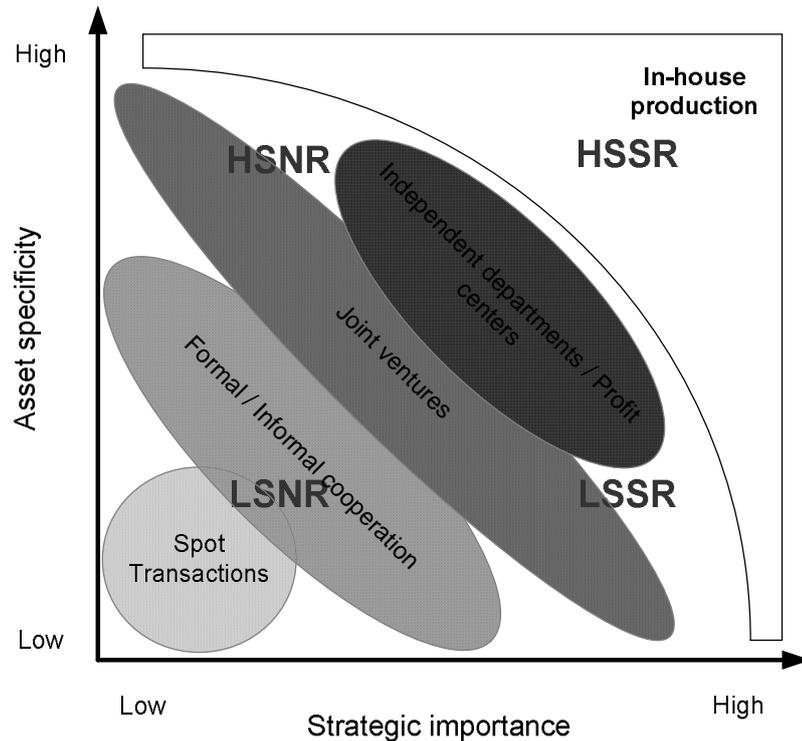


Figure 15 Combining resource types and cooperation modes, adapted from Arnold, 2000 and Watratjakul, 2005.

The figure indicates also the difference between micro operational level and strategic level outsourcing. Since the asset specificity or the strategic value increases, not only the size and complexity of the contact grow and interaction intensifies, but the benefits and risks come considerably higher. Therefore, outsourcing is usually applied to standard functions at the operational level, where the contract defines the boundaries within which the interactions take place. The contract no longer dictates the boundaries, and the relationship is deepened, when the interaction between the parties grows. This is where the true partnership begins to play a more important role than the business transaction written on paper. Both parties lean to each other and thereby gain together more than their combined efforts separately would bring. Competitive advantage and strategic long-term benefits are striven even at the costs of short-term benefits (Kiiskinen et al. 2002).

5 PROCESS TO REDIFINE THE FIRM

Previous chapters 2, 3 and 4 focus on exploring the theoretical background of creation of new intermediate markets and value-chain re-organization. The chapters describe how changing environment impacts on the capability development and achieving competitive advantage in an industry. Especially, the chapters aim to increase understanding about the nature of the decision-making process of strategic outsourcing. The objective is to expand the discussion about outsourcing a single transaction towards the analysis of a resource portfolio of the firm, in which the outsourcing opportunities are formed. The question of the industry change becomes relevant in this connection, because it is the driving force for an architectural change in the firms. This point of view has gained increasing popularity in management research because of the contemporary developments in the general economical environment. Today, new markets often emerge from the re-organization of the value chain as the firms focus on their core competencies, which is evident especially in this case.

The applied theories constitute a chain from forces that are shaping the industry to the selection between optional development actions and governance modes of impacted parts of the value chain. Hence, the research contributes to the early levels of recognition process of the strategic options, but also enlightens the challenge to find solutions for reorganization problems in an era of change. Reorganization is observed from the aspects of market option availability, the strategic value of capabilities, and selection of appropriate governance mode of an activity. The process relies on three independent parts, (1) description of the change in the industry, (2) influence of customer needs on the relevance of capabilities, and (3) developing and assessing optional boundaries of a firm (Figure 16).

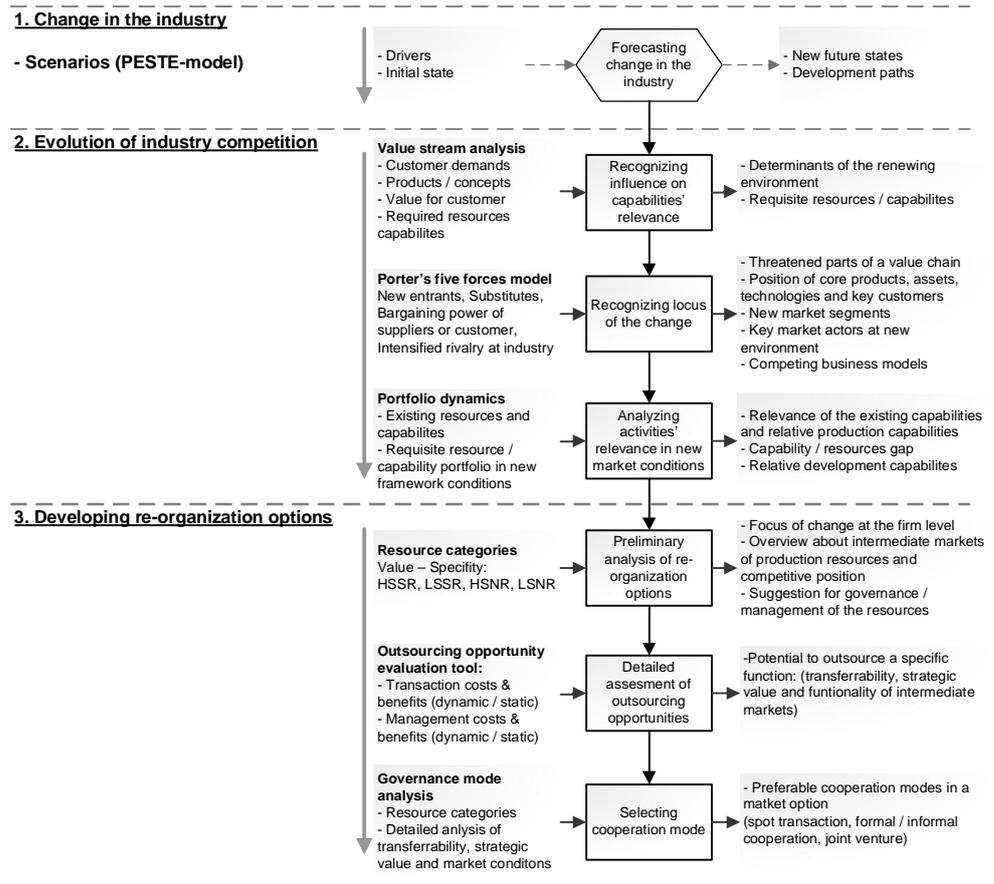


Figure 16 Summary of the analysis process

The drivers of the change are at the hub in the first part of the analysis. The drivers of business environment are considered external forces and trends that cannot be changed or radically influenced by actions of a single company. In other words, the drivers shape the framework conditions of an industry in spite of the form of the industry structure, and thus, the industry change may change the requisite capabilities or the combination of valuable resources, and later, create heterogeneity to the firms' performance. Various factors of industry transformation are evaluated through the PESTE model, which locates the origins of the drivers in several sources; political, economical, social, technological, and environmental factors. The analysis explores the most reasonable changes in the business environment, which are turned into terms of external customer requirements or changes in the customer behaviour and internal requisite competitive factors. Based on the above, new future stages can be figured and the most likely development paths can be evaluated through scenarios. Appraising the development of market

offering assists later in characterising the firms' relative competitive position. In that way, firms' potential to strike options for building competitive advantage can be evaluated.

The second stage of understanding the nature of change is to link the arising requirements with the firm's existing portfolio, which makes it possible to anticipate the impacts on the required management and productive capabilities, and, thus, the firm's ability to adapt its operations to the business environment. According to the previous discussion, the capabilities have to be evaluated at two levels, that is, from the management perspective and applicability of resources. The approach focuses macro-level transformation to the activity level in a firm and guides the later selection of a suitable resource portfolio and governance modes of activities.

In this, balance between static and dynamic performance of the firm has important role. The static performance is the efficiency of current processes and the dynamic performance indicate firm's capability to renew its processes (Chemawat & Costa 1993). The activity level analysis gives comprehensive understanding about impacts of evolving competition to boundary decisions and highlight potential managerial challenges during transformation of an industry. As long as the changes in the business environment can be anticipated organizations focus their actions toward static performance (Chemawat & Costa 1993). It is, the firms will incrementally improve performance of activities. Since, the unpredictability increases in an industry dynamic performance become more important role.

The options to develop or manage requisite resources and capabilities are explored in the last section of the process. The decision model has been built on two partially overlapping theoretical contingents: transaction cost economics (Coase 1937; Rhiordan & Williansom 1985) and resource-based (and knowledge-based) view (Barney 1991; Wernerfelt 1984; Teece et al. 1997; Teece 1998), which guide the selection between governance modes of activities. The transaction cost theory states that

first, a market will always offer the lowest costs of production of a good and, secondly, asset specificity is the key explanation of the difference in the transaction costs and it determines their level, and thereby has an influence on the transferability of a resource (Rhiordan & Williansom 1985). The aspect of resource transferability completely lacks the dimension of the strategic value of resources, which describes a resource's potential to gain value for a firm (Arnold 2000; Blomqvist et al. 2000; Jacobides 2005; Watratjakul 2005; Jacobides & Billinger 2006; Holcomb & Hitt 2007). The resources can be defined as assets, capabilities, processes, and knowledge that enable the implementation of strategies to improve efficiency and effectiveness in relation to the market needs. One key element in the evaluation of the strategic aspect of resources is the relation with the concept of competitive advantage. A firm can attain competitive advantage when its returns are above the normal level of the industry, and the firm can sustain it by valuable, rare, inimitable, and non-substitutable resources. The resources will create sustained competitive advantage by allowing to exploit opportunities in the markets and to neutralize threats from the competitors (Barney, 1991).

By combining the arguments of transaction costs economics with the resource-based view, we can define a two-dimensional framework for the conditions of the boundaries of the firm and value chain re-organization, *Hybrid-features of boundary decision* (Arnold 2000; Blomqvist et al. 2000; Holcomb & Hitt 2007; Jacobides 2005; Jacobides & Hitt 2005; Jacobides & Billinger 2006; Watratjakul 2005). The strategic value of resources create constraints for a firm that is moving activities outside the existing organizational boundaries, owing to the interdependence between resources, products, and firm's abilities to implement strategies, which most completely exploit their individuality and uniqueness (Barney 1986; Wernerfelt 1984). Transferability sets constraints for potential outsourcing proposals both from the supplier's and the firms' point of the view. The resources with a high transferability and a low specificity are common recourses, which have market

potential outside the firm boundaries and can be purchased from the markets with a low risk, which might indicate maturity and low attractiveness of markets at the same time. Transferring high specific resources outside the existing boundaries of a firm can be challenging for high complexity of monitoring and contracting. Those factors may decrease incentives of suppliers to increase efficiency, and thus, enable opportunistic behaviour, which lead growing costs of contracting (Rhiordan & Williansom 1985; Holcomb & Hitt 2007).

The complete analysis model for outsourcing can be described by applying hybrid-features of boundary decision to the analysis of (1) a firm's resources (Watratjakul 2005), (2) development of purchasing options (Jacobides 2005; Holcomb & Hitt 2007) and (3) selection of appropriate cooperation mode (Arnold 2000; Blomqvist et al. 2000). The approach leads to the following implications about the steps of the analysis process.

1. The firm's resources can be divided into four categories based on their value and transferability:
2. Outsourcing has two general objectives, substitution of an activity and enhancing capability basis, which are dependent on the resource category (Blomqvist et al. 2000; Holcomb & Hitt 2007). Substitution of an activity drives outsourcing of non-strategic activities, where a supplier would offer higher flexibility and decreased unit costs. Enhancing capability basis is related to the strategic activities, where using market options may offer remarkable benefits by capability complementarities.
3. The analysis of the outsourcing opportunity includes seven dimensions (Blomqvist et al. 2000; Jacobides 2005; Holcomb & Hitt 2007): asset specificity, numbers of bargaining suppliers, technological uncertainty, capability complementarities, strategic relatedness of suppliers, relational capability building mechanism, and cooperative experience of firm and supplier

4. Deriving a linkage between resource categories and optional governance modes enables selection of the most viable cooperation mode in each case (Arnold 2000, Blomqvist et al. 2000).
 - a. Low specificity non-strategic resources can be outsourced by spot transaction or informal cooperation modes, where cooperation is formal and efficiency is the most powerful decision factor.
 - b. Low specificity strategic resources and high specificity non-strategic resources can be outsourced by formal cooperation or joint venture modes, where cooperation is profound and rather informal.
 - c. High specificity non-strategic resources (HSNR) are designed for special purposes for a company or utilized in highly specific environments or market segments. Thus, resources have only little value outside company. Potential to build generic business models by a service provider with these resources might be low. Development of the service market should be well understood to avoid hold-up problems and forecasts about future customer needs scouted thoroughly, because of the risk of outsourcing attractive options. It might be advantageous, if the company can sustain an option to resumption of the activity or ascertain goal congruence with the service provider in different market conditions.
 - d. High specificity strategic resources (HSSR) are VRIN resources, which are essential for the company's long-term success. Thus, there are no options for market use in intermediate markets.

6 CASE – CHANGE OF DISTRIBUTION INDUSTRY

The energy distribution sector is currently under a radical restructuring process that will eventually impact the future business logics. Because of the recent regulatory amendments and other development trends of the electricity distribution business, electricity network companies nowadays struggle with more and more demanding legislative and regulatory requirements. Regulation focuses on developing the electricity networks as a market place for competitive electricity business, and on promoting the efficiency and quality of network related services.

These trends largely originate from the prevailing EU legislation and the national legislations in the Member States but also from technical advancements. The first point arises from the legislators' attempt to increase competition in electricity retail markets, the second one concerns both the environmental protection and human safety issues, and the third one indicates the societies' reduced tolerance to interruptions in electricity supply.

6.1 Value chain in electricity distribution industry

A unique characteristic of electricity distribution networks is that practically all citizens are customers of local electricity distribution companies, and that faulty operation of the networks immediately affects the electricity supply of numerous customers. In order to guarantee the short-term and long-term availability and accessibility, network companies are expected to develop and maintain their networks in accordance with the societies' needs. This includes managing electricity networks that are able to deliver the desired quality at reasonable costs, and servicing the electricity market participants in a non-discriminatory manner. A simplified illustration of the network-related operations is shown in Figure 17.

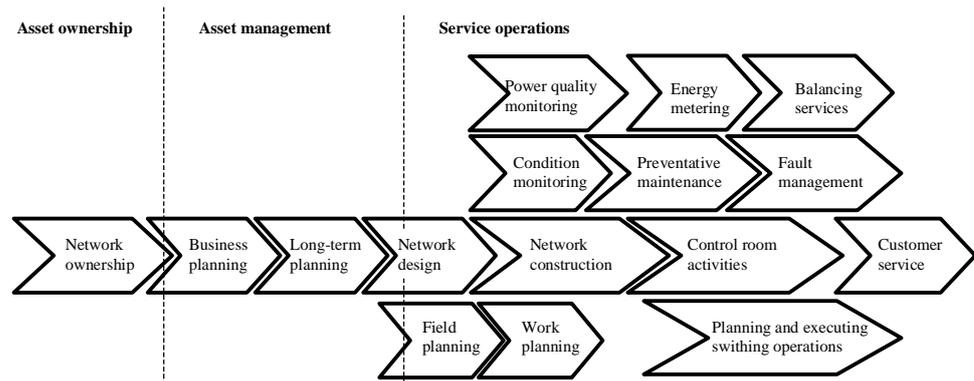


Figure 17 Simplified illustration of operations related to managing electricity distribution networks.

6.2 Organizational restructuring

Distribution companies have operated in natural monopolies for decades with little or no incentives for cost efficiency, which has resulted in individual companies having significant potentials for cost reductions. The introduction of regulation has dramatically changed the situation, although the strongest incentives or requirements for efficiency improvements are yet to be seen. So far, when deciding about internal business models, companies have used practices most convenient to them with little external forces influencing the decision-making process. In some cases, this has led to contracting out a network-related service such as network construction and maintenance, whereas in other functions no visible developments have taken place.

The real-life impact of the recent developments has been that instead of doing everything in-house, network companies' operations models are nowadays more diverged. However, business-oriented thinking has often been slow to emerge in the electricity distribution sector. A possible explanation is that the dynamics of the sector is strongly influenced by public ownership as well as the sector's nature as a sustainable natural monopoly. In this regard, electricity distribution sector differs from industries that are characterized by the presence of both private ownership and forces of competition. Consequently, the drivers for the efficiency improvements in electricity distribution sector are different from those seen in other industries. In particular, deregulation of the

formerly closed electricity sector has often been the first initiator of the many organizational restructurings observed. It is, however, noteworthy that deregulation as such does not create competition in the electricity network sector because it leaves the natural monopolies in electricity distribution untouched. Rather, it has been the re-regulation of the sector that has brought the costs of network-related services into the focus.

6.3 Assessment of the change

The ongoing transformation of the distribution sector prepares a fertile ground for creation of new business models or even offers options for the emergence of new intermediate markets. Therefore the research focuses on analyzing the behaviour of distribution network companies in the new environment and identifies arising restructuring options that will lead to attractive business opportunities from both the network companies' and service providers' perspective. As a result of the analysis process, the new architecture of distribution network companies will be determined based on the transferability of activities, their strategic relatedness, and potential capability gaps. The architecture decision, however, not only impacts the behaviour of network companies, but it unavoidably changes the value attributes and rules of customer relationships or requisite business models of the service provider. Thus, the research builds a constructive framework for the analysis of the impacts of transforming strategic customer needs of network companies to valuable resource configurations of the utility service provider (see Figure 18).

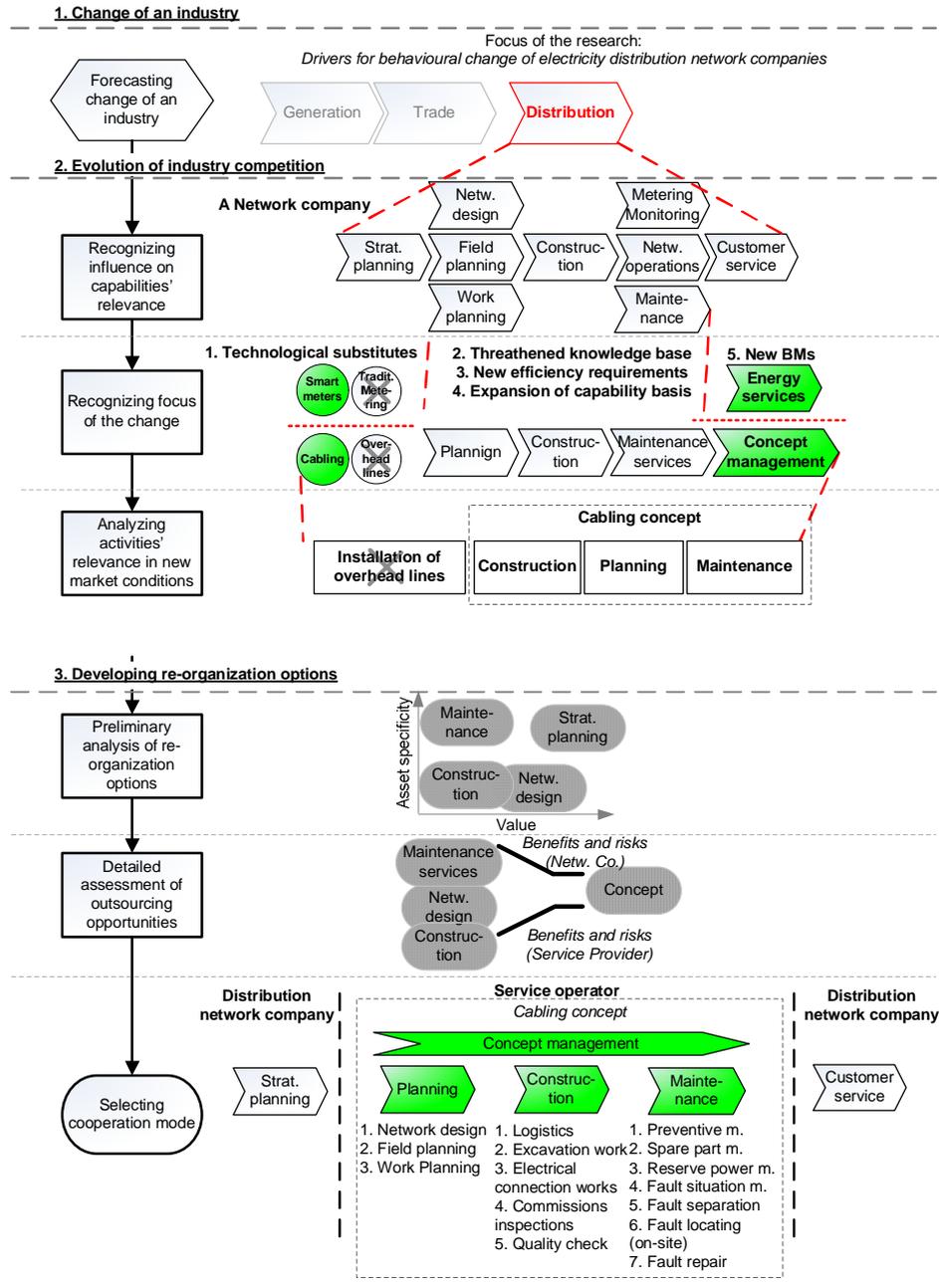


Figure 18 Analysis of the network companies

The forces that have an impact on the distribution network companies are illustrated in the Table 8. The drivers can be put into three major categories that define the transformation at a general level. Those are (1) requirement for a more functional marketplace for energy, (2) environmental aspects (i.e. defending against climate change etc.) and (3) security of energy supply. The new targets for network companies are described in the subcategories that define the impacts on the business operations.

Table 8 Drivers in the electricity distribution industry.

1. A market place for electric energy
I. Specifically defined efficiency targets in regulation.
II. Questions such as “what is the core business.”
III. End-users should have the opportunity to adjust their consumption behaviour.
IV. Need for a truly interactive customer interface.

2. Environmental aspects
I. Improving energy efficiency.
II. Promoting the use of renewable energy sources.
III. Restricting the use of detrimental chemicals.
IV. Landscape protection.

3. Security of supply
I. High interruption costs and compensations for customers.
II. Strong signal to build cable networks that are immune to catastrophes.
III. Incentive schemes targeted to power quality.

The drivers in the business environment have divergent influences on the activities of the network companies. For example, one activity may face only incremental changes in the performance requirements, whereas another function may be completely threatened by technology substitutes. Due to the scattered magnitudes of change at the activity level, the management regimes become inconstant, which creates diseconomies to the company. The magnitude of the changes drives the selection of activities to further analyses, because the monopoly companies operate in established positions, where they typically face only incremental changes, and the companies therefore almost completely lack renewing capabilities, which are required during radical changes.

6.3.1 Analyzing changes – network construction

For the analysis, the distribution network company is divided into activities as follows: strategic planning, network design, field planning, work planning, construction metering and monitoring, network operations, maintenance, and customer service. For instance, construction will face significant changes by the recognized drivers. Therefore, construction is chosen for analysis, because the changes also have an influence on the service providers’ requisite resource portfolios. The direction of change in the electricity distribution industry is analyzed

by the Porterian (1979) competitive forces framework, where competition is shaped by bargaining of customers and suppliers, rivalry in the industry, and a threat of new entrants and substitutes. On the other hand, equivalent competitive forces influence the operational environment of the service providers and shape the business models and other structural factors. The competitive changes are driven by technological substitutes (cabling of networks), threatened knowledge base owing to the transforming technologies, new efficiency requirements for the construction activities, expansion of the capability basis because of new planning standards required by cabling, and construction and maintenance processes and equipment. Finally, the transformation enables the emergence of competing new business models that are built on the new capability and resource portfolio.

In practice, a shift towards cable networks makes knowledge about construction of overhead lines quite worthless because this construction method will be losing significance in the main markets. The technological change does not only have an effect on construction, but it has wider influences on long-term planning of networks and field planning standards, and a radical influence on maintenance practises. The overall analysis of the impacts of cabling shows that it will radically change the behaviour of network companies, which will require a complete service concept from planning of networks to their maintenance in the future. Therefore, service providers should pay attention to the development of concept management capabilities, which makes it possible to conjoin planning to the construction process and delivers critical information of the structures to the maintenance processes.

The previously described development in the distribution network industry drives companies to reconsider their core competences and to redefine the architectures. A resource analysis of the company is the ground for the architectural decision to react to the transformation of the industry. Companies' activities and resources are categorized by their

strategic value, complexity, and resource specificity for screening the potential restructuring approaches. The resources, which have very high specificity, complexity, or strategic value in a predicted state of the future, cannot be moved outside the boundaries of the firm. These are for instance strategic planning of networks and closely related activities in the case of construction. Potential outsourcing opportunities may be found from activities that are not crucial for the long-term performance of the network company, or they may require so high investments for developing new capabilities or resources that a single company will suffer from significant diseconomies because of the limited market area of the natural monopolies. Based on the above, the outsourcing options in the case of cabling may be found in the construction, planning and maintenance activities. Actually, concept management belongs to the group of previously mentioned outsourceable activities, because of interdependencies between the parts of the cabling concept.

The final decision of restructuring will be made by a bipolar analysis process of the actual business potential of the outsourcing, where benefits and risks are evaluated. The network company focuses on the risk of opportunism, hold-up problems, pricing, and opportunities to reach a complete contract, and finally on the direct benefits and risks for financial performance. In the analysis process, the service provider analyzes the business potential of an activity outside the specific customer, the amount of customer-specific investments, the service provider's competitive position, abilities to revenue gains in generic segments, and long-term dependence on the customer. The research case shows that cabling has potential to be outsourced from both a service provider's and the network company's point of view. The outsourcing can be implemented by moving maintenance, construction, and planning independently to service providers, but, management of network information would become complicated in that case and either the service provider or the network company would be able to gain advantages. Therefore, a more efficient approach for outsourcing of the cable network construction is to apply a concept mindset. The cabling

concept integrates planning, construction, and maintenance operations into one service system, which guarantees efficient information sharing and quality control over the stages from planning to network operations.

The cabling concept is complex in its entirety, because planning, construction, and maintenance include numerous subactivities (see Table 9), where responsibilities are transferred to the service provider. Long-term partnerships and service agreements are hence required if the network company decides to acquire cable network construction by a turnkey service model.

Table 9 Activities of the cabling concept

<i>Planning</i>	<i>Construction</i>	<i>Maintenance</i>	<i>Concept management</i>
1. Network design	1. Logistics	1. Preventive maintenance	1. Purchasing
2. Field planning	2. Excavation work	2. Spare part management	2. Contractor evaluation
3. Work Planning	3. Electrical connection works	3. Reserve power management	3. Network information sharing and warehousing
	4. Commissions inspections	4. Fault situation m.	Etc.
	5. Quality check	5. Fault separation	
		6. Fault locating (on-site)	
		7. Fault repair	

5. SUMMARY AND CONCLUSIONS

The applied theories constitute a chain from the forces that are shaping the industry to the selection between optional development actions and governance modes of the impacted parts of the value chain. Hence, the research contributes to the early levels of the recognition process of the strategic options, but also challenges to find solutions for the reorganization problems in an era of change. Reorganization is observed from the aspects of market option availability, capabilities' strategic value, and selection of an appropriate governance mode of an activity. The research is based on three independent parts: (1) description of the change in the industry, (2) influence of customer needs on the relevance of capabilities, and (3) developing and assessing the optional boundaries of a firm.

Industry competition has a radical impact on the management regimes and requisite capabilities of a firm. Discontinuities on development paths affect performance requirements and requisite level of renewing capabilities, which indicates moving balance between static and dynamic performance. The static performance is the efficiency of current processes and the dynamic performance indicate firm's capability to renew its processes. As long as the changes in the business environment can be anticipated organizations focus their actions toward static performance. It is, the firms will incrementally improve performance of activities. Since, the unpredictability increases in an industry dynamic performance become more important role. Evolving competition impacts on the company's internal structure and boundary decisions as a result of the capability distribution along the value chain in the company and its environment, because changes do not occur regularly between both firms and activities.

The main reason for the heterogeneous distribution of resources and capabilities is that the productive performance rest on specific knowledge about "how to do things", which is typically a path, depending on and strongly related to the learning process. The previous

can be, however, result of the prevailing industry attributes. The environmental conditions will lead industry toward incremental development, and decreasing incentives to renewals, if it emphasise static performance (sustaining real assets, low investment intensity, and stagnant or increasing prices). Dynamisms emphasis in industry attributes (high investment rates, especially to intellectual property, threat of asset obsolescence, and price erosion) has opposite impacts to performance requirements, and lead firms to develop their renewing capabilities. Hence, a company that is considering whether to keep an activity integrated or not compares its current capabilities with those of other firms in an industry. Since the company's own productive capabilities are lower than the potential partner can offer, using the market option is a profitable choice.

The general framework conditions for value chain restructuring can be determined by the economic theories known as Transaction cost economics (TCE) and Resource-based view (RBV). In this case, outsourcing is characterized as struggling to gather new and valuable capabilities from value network. The complete decision framework requires at least the following dimensions to be included in. TCE's arguments are: asset specificity, small numbers of bargaining, and technological uncertainty. RBV states that capability complementarities, strategic relatedness, the relational capability building mechanism, and cooperative experience are the most relevant factors that should be analyzed.

Combining TCE and RBV within an integrated framework makes it possible to evaluate the two dimensions of a company's resources, the strategic value and transferability. The framework divides the resources into four categories, which indicate potential risks and benefits of re-organization. The categories are: *high-specificity strategic resources* (core competencies that are essential to sustain competitive advantage, and therefore cannot be transferred outside firm's boundaries), *low-specificity strategic resources* (core-close activities complement core

activities and support competitive advantage, outsourcing is optional in particular conditions), *high-specificity non-strategic resources* (supporting activities, the asset specificity of which is high or markets undeveloped because of low market value for service provider), and *low-specificity non-strategic resources* (common resources or supporting activities, which outsourcing is effective option in most cases).

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