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Business Model Concept:
Building on Resource Components



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Building on Resource Components

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Abstract

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The importance of the business model concept is widely recognised in contributions to the existing business and management literature. The concept grew into a generic term to describe the logic of what a firm does and how it does it. However, while the money generating characteristics of the concept are well known, there remains fundamental confusion as to its essential meaning in management thinking. This dissertation argues that current conceptualizations for the business model concept are poorly developed and in need of enhancement in order to fulfil prevailing needs in both theory and practice.

The study investigates current conceptualisations of business models and identifies the deficiencies, thus enlarging earlier academic discussion. This is achieved by means of a review of the business model literature and a single case study exploiting a business model concept. An additional empirical investigation of practitioners' perceptions of the concept of business model illustrates the conceptual shortcomings within the practising community. To precisely identify deficiencies in business model conceptualizations, the study establishes criteria to investigate research constructs. The initial criteria were developed into broader general research criteria for use in a variety of contexts to examine how a particular research construct under study could be developed. These criteria are used here to identify the differences in existing business model conceptualizations and also the needs for further development of the discipline.

Finally, the study proposes and empirically validates the components for the business model concept to fulfil the needs identified in previous phases. This is carried out by populating and classifying the resources presented in the resource-based view in management literature. A categorisation of these resource components renders the listing of resources more easily applicable in future research. In addition, several conclusions are drawn that have implications for managers in areas such as pinpointing potential bottlenecks in the current business model configuration.

The study paves the way for the theory-building phase of research into the business model concept. Future studies should investigate and fine-tune the details of the proposed resource categorisation and its structure. Such studies should also test the categorisation more thoroughly and evaluate its applicability to multiple case studies. In addition, future research should examine the linkages between resources and strategy, and between resources and operational activities. Finally, future research could examine in detail the usage of individual resources, the relationships between resources, the assembling of resources and the impact this has on the success of value creation.

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Fishing in its various forms is one of my favourite hobbies. Learning how to fish is a lifelong process, where you have to consciously focus your thoughts and instincts on the situation at hand. The more you learn, the more you realise how little you actually know. More importantly however, this spurs you on to even more learning. Doing research resembles fishing in many respects; you have to be humble, patient, and ready to learn all the time. I have also found that both these activities stimulate my intellectual curiosity and this may be one of the reasons why I still enjoy spending so much of my time on them.

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Tampere, July 2008

Marko Seppänen

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Part Two

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- I Seppänen Marko & Mäkinen Saku (2005). *Business model concepts: A review with case illustration*. The proceedings of the International Engineering Management Conference (IEMC) in St. John's, Newfoundland, Canada, September 11–14, 2005. Volume I, 2005, Article no 1559156, pp. 376-380.
- II Mäkinen Saku & Seppänen Marko (2005). *Gaps in definitions of a business model concept in practice and theory: An empirical study*. The proceedings of the 14th International Conference on Management of Technology (IAMOT) in Vienna, Austria, May 22–26, 2005. CD-ROM. 9 pages.
- III Mäkinen Saku & Seppänen Marko (2007). *Assessing business model concepts with taxonomical research criteria. A preliminary study*. Management Research News. Vol. 30 No. 10, pp. 735-748.

SECTION B: Developing the solution

- IV Seppänen Marko & Mäkinen Saku (2007). *Towards a classification of resources for the business model concept*. International Journal of Management Concepts and Philosophy. Vol. 2, No. 4, pp. 389-404.
- V Seppänen Marko (2006). *A propositional inventory of human resources for the business model concept*. The proceedings of the 3rd International Conference ENTIME 2006. Gdansk, Poland, September 22–23, 2006. Reprinted in Prace Naukowe. Katedry Ekonomii i Zarzadzania Przedsiębiorstwem. Politechnika Gdanska. Tom VI, pp.291-298.
- VI Seppänen Marko (2008). *Resources in a business model concept: An empirical study*. The proceedings of the 17th International Conference on Management of Technology (IAMOT) in Dubai, United Arab Emirates, April 6-10, 2008. CD-ROM, 15 pages.

Part One

1 INTRODUCTION

“Business models provide a powerful way for executives to analyse and communicate their strategic choices. Although there is some chance that firms with sloppily formulated business models will succeed in the marketplace, the probability is low since the core logic for value creation and capture will not have been clearly thought through. As the old saying suggests, blind squirrels do occasionally find acorns, but, until they do, there is a lot of wasted effort. Just like firms that burn through their working capital, the squirrels may run out of energy before they achieve their prize.” (Shafer, Smith, & Linder, 2005, p.207)

1.1 Background

It has been proposed that most of the advances in science will be based on the intersections of disciplines and cultures (Johansson, 2004). In other words, by adopting principles and ideas from one field of science to another field we gain a greater chance of new insight. Many recent advances in scientific research are based on a combination of human and natural design. Like biomimicry, which is a relatively new science that studies nature, its models, systems, processes and elements and then imitates or takes creative inspiration from them for the solution of human problems (Benyus, 2002). In solving emerging problems in business research, we have witnessed similar adoptions of concepts from other disciplines. For instance, swarm intelligence based on biological analogy is used in outsourcing firms' R&D (e.g. Miller, 2007) whereas genetic algorithms from medical research are nowadays employed in optimizing warehouse logistics (e.g. Yao & Chu, 2008).

Further examples of how business research has benefitted from the advances in biological sciences are the applications of population ecology theory (Hannan & Freeman, 1977). Principles developed in biological ecology, for example, in order to explain how ecological niches are born and how their relative competitive positions change as evolution furthers, are widely used in studies of the population ecology of organizations. Similarly, evolution of organizations has established a solid research paradigm (Amburgey, 1996; Bruderer & Singh, 1996; Young, 1988; Wholey & Brittain, 1986). The evolutionary approach has adopted its guiding principles, for example with regard to environmental selection, from

Darwinian notions of evolution. Furthermore, convergence and coevolution approaches are clearly evident in the field of organizational research (Bruderer & Singh, 1996). Such examples serve to illustrate how ideas from one discipline or even science can help to solve problems in another and how research continuously explores new paths to add our knowledge.

Besides utilising a diverse set of ideas, the basis of any scientific advance relies on identifying and classifying the key concepts of the field. In the history of biological science, early artificial classification systems were replaced by natural classification system in the 18th century (Mandelbaum, 1957). In 1735, Carl Linnaeus established conventions for the naming of living organisms, based upon shared physical characteristics (Anderson, 1997; Davidson, 1887). The work of Linnaeus represents the starting point of binomial nomenclature, and Linnaeus developed the system of scientific classification which is now widely used in the biological sciences (Gould, 1996). Linnaeus established the idea of a hierarchical structure of classification, which is based upon observable characteristics. While the observable characteristics regarding what are considered to be scientifically valid have changed with expanding knowledge, the fundamental idea of the classification remains sound (Portin, 2007). An example of recent advancements in this field is DNA sequencing – unavailable in Linnaeus' time – that has proven a useful tool for classifying living organisms and establishing their relationships with others.

This dissertation borrows from both interdisciplinary and basic classification approaches. It deals with the business model concept, which is designed to aid managers in analysing and communicating their strategic choices. The dissertation looks into two major issues. Firstly, it examines the business model as a conceptual system in order to ascertain the current state-of-the-art of the field. Conceptual eclecticism is typical of a young discipline in its early stages of growth and development. This study forms the starting point for the following taxonomical investigation in which the business model concept is assessed as a theoretical construct. Secondly, the dissertation attempts to respond to the observed shortcomings of the business model concept by identifying and classifying some of the basic components of a business model concept. Theoretical approaches are complemented with empirical data that are employed in developing the conceptual framework of resources.

1.2 Business model as a concept

In strategic management, there exists a wide array of concepts such as dominant logic, core competence, and strategic intent – all of which are common in the business world. For the contemporary manager, the concept of business model is also familiar. A business model provides a way for managers to analyse and communicate their strategic choices. However, while a business model facilitates

analysis, testing, and validation of a firm's strategic choices, it is not in itself a strategy (Shafer, Smith, & Linder, 2005; Yip, 2004; Magretta, 2002). In fact, the business model as a concept provides a link between strategy and operations and enables exploitation of entrepreneurial opportunities (e.g. Hedman & Kalling, 2003; Amit & Zott, 2001).

The concept of business model has received much attention in popular management literature. The study of business models is a major topic of strategic management research since the business model concept affects firm's possibilities for value creation and capture (Amit & Zott, 2001). Firms are continuously faced with the challenge of exploiting the business potential of innovations. This exploitation inevitably involves new activities in the organisational context and therefore, creates a need to select and arrange the resources of the firm in these new activities (Noda & Collis, 2001). Although current business model conceptualisations elucidate resources, explanations of the composition, the subject matter, and the structures of the resource compositions have remained ambiguous (Morris, Schindehutte, & Allen, 2005). The business model concept has given rise to the emerging approach to firm-level design, in which the resource-based theory (Barney & Clark, 2007; Peteraf, 1993; Barney, 1991; Wernerfelt, 1984) and its successor, theory on dynamic capabilities (Helfat et al., 2007; Eisenhardt & Martin, 2000; Teece, Pisano, & Shuen, 1997) play the central roles. This dissertation focuses on the concept of business model and its components from the RBV perspective, as it is has been recently called (Barney & Mackey, 2005).

"Business model" was coined as a generic term to describe the logic of what a firm does and how it does it. Though it appeared for the first time in an academic article in 1957 and in the title and abstract of a paper in 1960, it did not come into common use until in the end of 90s. During the dot-com boom at the turn of the millennium, the term has become increasingly widespread. (See Osterwalder, Pigneur, & Tucci, 2005, p.6) Figure 1 below illustrates its usage in the world's major newspapers since 1995 to the beginning of 2007.

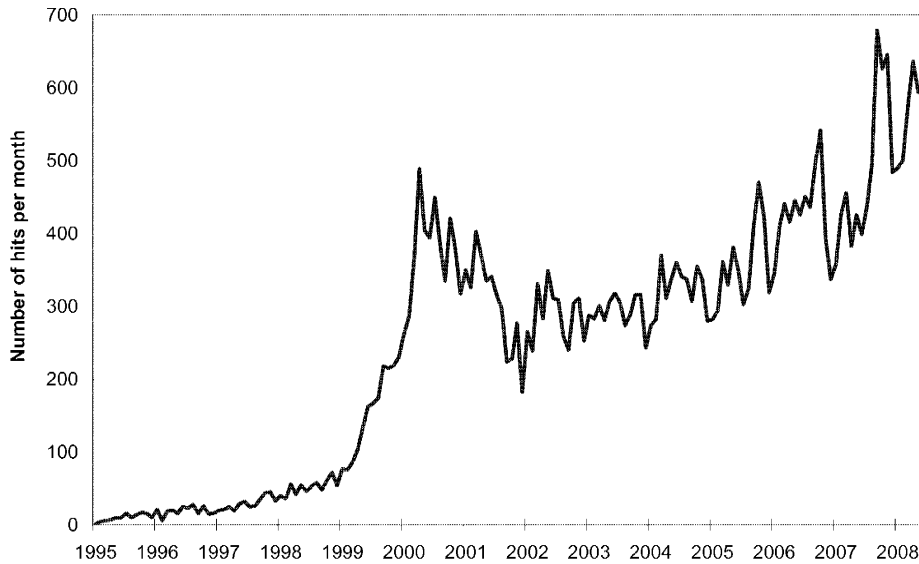


Figure 1. Usage of the term "business model" in the world's major newspapers (source: Nexis® UK, data retrieved June 12, 2008).

Business people are likely to encounter the following statements to describe the concept: “*Business model is a framework for making money*” and “*Business model describes how we are intending to make money*”. However, though the money-generating aspects of the concept have been widely acknowledged, there is still no clear consensus as to its actual meaning in management’s thinking. The term has even been dismissed as a meaningless jargon. Nonetheless, its ever-increasing use serves to underline the importance of the term and reflects the demand for a sound concept to respond to both theoretical and empirical needs.

Scientific research starts with the realisation that the available fund of knowledge is insufficient to handle certain problems (Bunge, 1967). Therefore, it was hardly surprising that researchers began to publish articles dealing with business models in the late 1990s, as Osterwalder (2004) has described. Since the essence of the business model concept is its being a model, these early attempts offered simplified representations of a particular reality. When a business model concept is a prototype or a surrogate of a complex situation, it typically purports to accomplish several tasks that assist managers in their deliberations. In order to specify the requirements that the concept should fulfil, Chesbrough and Rosenbloom (Chesbrough, 2003; Chesbrough & Rosenbloom, 2002) have provide the following list of items:

- Articulate the value proposition and its relation to intended market segment;
- Define the value chain of the firm that is required to create and distribute the offering outlined in the value proposition;

- Determine the complementary assets needed to create the offering and support its position in the value chain;
- Position the firm within the value network context, including identification of potential complementors and competitors;
- Estimate the cost structure and profit potential associating the business model concept to value creation;
- Formulate the means whereby a firm will gain and hold an advantage over its rivals linking the business model concept to strategy.

This list has been widely acknowledged in the literature as defining the functions of the business model.

Below I complement the review of Shafer et al. (2005), which ends at the year 2003, with recent additions to the business model literature. Shafer et al. address the conceptual confusion and review twelve business models and their components. The authors note that most of the papers reviewed relate to e-business and are thus context-specific. Their review concludes with the following brief definition: A business model is *“the representation of a firm’s underlying core logic and strategic choices for creating and capturing value within a value network”* (Shafer, Smith, & Linder, 2005, p.204).

Afuah (2004, p.9) defines a business model as *“the set of which activities a firm performs, how it performs them, and when it performs them as it uses its resources to perform activities, given its industry, to create superior customer value (low-cost or differentiated products) and put itself in a position to appropriate the value”*. In addition, Afuah (2004, p.75) makes an important distinction between business model and revenue model. A revenue model is a framework for generating revenue whereas a business model is a framework for making a profit.

Morris, Schindehutte, & Allen (2005) emphasise the entrepreneurial perspective, defining a business model as *“a concise representation of how an interrelated set of decision variables in the areas of venture strategy, architecture, and economics are addressed to create sustainable competitive advantage in defined markets”*. They propose a six-component framework for characterising a business model, regardless of venture type. Their model represents a strategic framework for conceptualizing a value-based venture allowing the user to design, describe, categorise, and analyse a business model for any type of company. By specifying the elements that constitute a model, the framework enhances the ability to assess model attributes. The authors observe that the business model holds promise as a unifying unit of analysis that can facilitate theory development in entrepreneurship.

Davenport, Leipold, & Voelpel (2006, pp. 172-173) provided a lengthy, generic definition of business model and its core elements in the following terms: *“The*

particular business concept (or way of doing business) as reflected by the enterprise's core value proposition(s) for customers; its configured value network(s) to provide that value, consisting of its own strategic capabilities as well as other (e.g., outsourced/allianced) value networks and capabilities; and its leadership and governance-enabling capabilities to continually sustain and reinvent itself to satisfy the multiple objectives of its various stakeholders (including shareholders)." According to the authors (Davenport, Leipold, & Voelpel, 2006), the generic elements in business models are defined as 1) particular customer base including specific need categories, 2) customer value proposition that could also involve new customer base, 3) value network (re)configuration for that value creation and delivery, and 4) leadership capabilities that ensure the satisfaction of relevant stakeholders. This definition shows close correspondence to the definitions listed above.

Malone et al. (2006) adopt a different approach in defining several business models. They distinguish their ideal types according to two fundamental dimensions of what a business does. The first dimension considers the type of rights being sold, and the second one considers the type of assets involved. The combination of these two dimensions generates sixteen detailed business models for their typology. This kind of a 'slightly typological' approach was widely used in the early days of e-business models (e.g. Applegate, 2001; Timmers, 1998).

Based on the above discussion it can be claimed that the concept "business model" is ambiguous and that the term itself has many meanings. In the present study, the business model concept designates a theoretically sound construct that fulfils the functions of Chesbrough and Rosenbloom (2002) presented above. As a summary and for the purposes of this thesis, I adopt the definition of the business model concept of Osterwalder et al. (2005, p.3), which defines the concept as a managerial tool as follows:

"A business model is a conceptual tool that contains a set of elements and their relationships and allows expressing the business logic of a specific firm. It is a description of the value a company offers to one or several segments of customers and of the architecture of the firm and its network of partners for creating, marketing, and delivering this value and relationship capital, to generate profitable and sustainable revenue streams."

1.3 Research questions and objectives

This dissertation focuses on the concept of business model. The main motivation for the research has been the desire to understand this concept and to study how it could support both practical and theoretical needs. The thesis is founded on two broad questions:

RQ1: What conceptualizations for a business model concept have been proposed?

RQ2: What resource components does a business model concept include?

The first question attempts to determine the state-of-the-art in this rapidly evolving field. The findings pave the way for the second question that addresses the needs for conceptual development recognised in both theory and practice. The business model literature includes examples of the development of the business model concept according to the resource-based view. However, the utilisation of resources as components in the business model concept is an approach that has not yet been addressed.

In order to respond to the challenges posed by the research questions, three objectives have been formulated. The primary aim of the dissertation is as follows:

- I To recognise the state-of-the-art of *the business model conceptualizations*. This objective involves a review of the business model literature and an empirical example of exploiting a business model concept. In addition, there is an investigation of practitioners' perceptions of the concept of business model in order to illustrate conceptual shortcomings within the practising community.
- II To analyse the business model concept as *a theoretical construct*. In addressing this objective, current business model concepts are subjected to taxonomical investigation to identify their differences as well as the needs for further development of the discipline. This also involves the development of appropriate taxonomic criteria.
- III To develop and validate *the resource components* for the business model concept. This objective is based on the results derived from the previous objectives, particularly the second objective which revealed the underdeveloped taxonomic level in the business model concept. This development adopts the resource-based view as suggested in earlier works in the field. A categorisation of resources is needed in order to make sense of the resources as building blocks for future research.

To answer the first research question entails achieving objectives I and II, while objective III seeks to answer the second research question. Since this field of the business model discipline is still in its infancy, multi-disciplinary methods are in fact necessary (e.g. Edmondson & McManus, 2007). The claim is also made here that, whereas a methodologically orthodox approach currently prevails in strategy research, a methodologically pluralist approach is actually needed (Heugens &

Mol, 2005; Barr, 2004; Van Maanen, 1979). Thus, the exploitation of both qualitative and quantitative methods makes it possible to develop the basic elements for the business model research.

In pursuing these objectives for and answers to the research questions, the study relies primarily on examination of the field literature and conceptual analysis. Conceptual analysis begins by identifying the relevant research questions that are justified by reviewing the status in both theory and practice (Papers I, II and III). Ambiguity and vagueness in an emerging concept, such as the concept of business model, can be reduced if the term is clearly defined. Definition enables determining the meaning of terms which may have been in pre-systematic usage (Bunge, 1967, p.136). Thus, taxonomical investigation is employed in this study to explore the shortcomings of current conceptualisations compared with the purposes defined for the concept (Paper III).

Based on a literature review and the classification of resources by Hunt (2000), a two-level categorisation of the resources is created using a pilot case (Paper IV). This categorisation extends to the third-level elements for exemplification (Paper V). Finally, the validation of the developed categorisation is put to proof (Paper VI). Hence, empirical data is utilised in three phases: firstly, to identify shortcomings in our knowledge (Papers I and II), secondly, to develop a theoretically-driven categorisation (Paper IV), and finally, to validate the categorisation (Paper VI).

1.4 Resources and their classification

In this dissertation, I attempt to provide a starting point for a systematic approach for resources in management literature that has been advocated by Barney & Clark (2007, pp. 255-257). The business model concept encompasses those resources to which a firm has access (Osterwalder & Pigneur, 2004; Betz, 2002; Weill & Vitale, 2001; Venkatraman & Henderson, 1998). The resource-based view (RBV) is an inside-out perspective on organisation that seeks to identify the characteristics of firms with superior performance (Barney & Arikan, 2005; Rouse & Daellenbach, 2002). According to the RBV, if a firm can assemble a bundle of general resources at its disposal in a unique way, it can achieve a sustainable competitive advantage when exploiting a business opportunity (Barney, Wright, & Ketchen, 2001; Peteraf, 1993; Hall, 1992; Conner, 1991; Wernerfelt, 1984; Penrose, 1959). Similarly, a single resource can also create sustainable competitive advantage (Barney, 1991). In strategy research, the usefulness of a resource level of analysis has been recently reaffirmed (Pacheco-de-Almeida & Zemsky, 2007).

An organisation includes all those dimensions of implementing a firm's strategies that are, in principle, imitable but are nevertheless important if a firm is to gain

competitive advantage. Barney (2002) sees “*these dimensions of strategy implementation as ‘complementary resources,’ since these implementation skills are not sources of competitive advantage by themselves, but are nevertheless important if a firm realizes the full competitive potential of its resources and strategies.*” (Barney & Clark, 2007, p.230; Barney & Mackey, 2005, p.10) However, there are fewer studies linking specific firm resources and capabilities with the ability to create and implement firm strategies (Barney & Mackey, 2005). This is largely because current typologies of firm resources are very broad in scope, such as Barney’s (2002) distinction between financial, physical, human, and organisational resources.

The RBV literature has attempted to list existing resources (Bueno, Morcillo, & Salmador, 2006; Fernández, Montes, & Vázquez, 2000) or to build theoretical outcome-related classifications for resources (Amit & Zott, 2001; Praest, 1998). Although the main focus of the RBV is on the resources that can provide sustainable competitive advantage, so-called complementary resources are also discussed (Barney & Clark, 2007; Barney & Mackey, 2005). These complementary resources are nevertheless important if a firm hopes to realise the full competitive potential of its resources and strategies. The resources have been discussed in current business model conceptualisations, but definitions of the resources and the structures of the resource compositions remain ambiguous (Morris, Schindehutte, & Allen, 2005). As a result, earlier proposals have fallen short in developing comprehensive frameworks so that it is often difficult to identify resources clearly and distinguish one from another. In the present study, resources are classified in order to overcome such shortcomings. As the fourth paper describes in more detail, the first list of resources was drawn from strategy management literature, and the list was then classified according to general classification principles. The remainder of the present section summarises some of the main issues concerning classification and related concepts.

Typologies and classifications are common tools to order and make sense of data. As Rich (1992, p.758) has aptly stated, “*classification permits parsimony without simplicity, the ability to recognize fundamental structure and relationship and a basis for theory development and hypothesis testing*”. Even though the terms classification, typology, and taxonomy have been used interchangeably in much of the literature, these terms have different purposes in management literature (Doty & Glick, 1994; Carper & Snizek, 1980). Classification schema and taxonomy usually refer to systems categorising phenomena into mutually exclusive and exhaustive sets with discrete decisions rules. Taxonomic studies evaluate the properties of classification schemes used in classifying objects into groups, thereby focusing on general principles describing the objects of interest (Scherpereel, 2006). The third term, typology, refers to conceptually derived interrelated sets of ideal types. Differences between taxonomy and typology can be briefly summarised as follows: taxonomy has 1-n

criteria to differentiate classifiable objects whereas a typology has 1-n dimensions that create a typological space in which objects will be placed according to their characteristics as assessed by the typology's dimensions (Bailey, 2005; Doty & Glick, 1994).

Categorisation refers to the formation and use of natural and social concepts of objects by individuals to organise their worlds (Dutton & Jackson, 1987). Cognitive theories assume that individuals employ schema to understand their world. Schema describes data structures in memory that represent knowledge about concepts. For categorisation, an individual has to differentiate objects from each other. Those attributes that serve to differentiate categories are said to have high cue validity. However, such categories are "fuzzy" because of the difficulty of observing prototypical cases in real life (Dutton & Jackson, 1987). In addition, theoretical models cannot only be constructed between theory and reality but also act as communication devices (Skyttner, 2001).

Classifying action will not always result in a balanced classification, in which the amount of classes would be the same in each category. Some categories may easily be more crowded than may the others. From the biological sciences, it is clear that that some forms in nature have been much more capable of living (Valtaoja, 2007). For instance, the category of arthropods (including e.g. insects) is about twenty times bigger than the category of chordates (including, e.g. human beings). Some species are isolated bush warriors, the only known representatives of their phylum. Similarly, it may be assumed that resources as the objects of social communication may eventually resulted in an unbalanced categorization. For instance, the category of human resources has received much more scholarly attention in management literature than informational resources (Seppänen, Pirhonen, & Mäkinen, 2008).

1.5 Concepts and knowledge

A concept is an abstract idea or a mental symbol that is typically associated with a corresponding representation in language. In colloquial language, concepts may have different meanings depending on, for instance, the speaker and the communication context. We need concepts in our life to cope with mundane issues. Concepts enable us to structure and clarify relations between cause and effect for our daily decision-making. Concepts are used in our thinking for purposeful, reasoned and goal-directed action to solve problems, formulate inferences, calculate likelihoods, and make decisions. In other words, we use our cognitive skills and strategies to increase the probability of an intended outcome.

Virtually all social science theories are originally explicated using words and language. Despite their many advantages, language-based theories have an enormous limitation: they are insufficiently precise (Barney & Clark, 2007). In a

scientific context, imprecise concepts make it difficult to cumulate knowledge. However, some ambiguity in concepts is valuable to both practitioners and researchers. Ambiguity allows practitioners the flexibility to adapt a concept to fit the individual's specific situation and offers researchers the flexibility to apply the concept meaningfully in a particular context (Osigweh, 1989). However, such ambiguity is not intended to promote imprecision; a concept does not have to be vague to lend itself to versatile usage.

In scientific endeavour, we must reason and acknowledge the limits of our knowledge and what a researcher holds as true. Ontology is a branch of philosophy focusing upon the origins, essence and meaning of being (Gruber, 1993). In an ontological sense, this thesis builds on *a priori* concepts that exist in previous scientific works and therefore, in an ontological sense, have already established their real meaning. This approach becomes evident in the third paper, in which I develop taxonomical criteria and assess existing business model concepts with these criteria. Science can be seen as a selection process which evolves by building on and developing existing theories (Hull, 1988). We believe in the self-correcting nature of science and recognise that our theories are usually only approximations of reality (Darmstadter, 1974; Reid, 1922).

Epistemological questions always supplement ontology, focusing on knowledge within the adopted paradigm. The two basic epistemological questions are: 1) What is knowledge, and 2) How we can acquire knowledge. In this thesis, I adopt the traditional approach to knowledge, which states that knowledge is justified true belief (Steup, 2005). Concepts are the building blocks upon which propositions are based, and scientific knowledge exists only when propositions are organised systematically, so that we can perceive their interrelations (Bacharach, 1989; Osigweh, 1989). Although there are such kinds of knowledge as knowing how to do something, or knowing someone in person, this thesis as a scientific output is focused on propositional knowledge. In other words, I focus on theoretical reason (knowing that) rather than of practical reason (knowing how). A proposition is a structured entity designating the relationship between objects and properties, for example, 'S knows that p'.

The testimony of our belief consists of empirical validation, in which the perceptions of practitioners are investigated. Four papers (I, II, IV and VI) utilise direct empirical observations, and consider the experienced business managers as the main informants about reality. A more detailed description of how each group of informants was selected is presented in each paper. In general, I will assume that the business managers possess such knowledge of and insights to their businesses that when their perceptions have sufficient coherence between each other, I can believe the concepts under study will have their equivalents in reality. Perceptual experiences are a source of justification only because we are justified in believing them to be reliable (Steup, 2005).

Finally, concerning the justification of the theoretically derived framework in this thesis, I employ the correspondence theory of truth (David, 2005). The well-known problem of regress – that considers the relation of correspondence and when a proposition corresponds with the facts – becomes evident when the theoretically derived categorisation is being empirically validated. Hence, Krippendorff's alpha method (Krippendorff, 2004, , 1980) is used as a measure of coherence between respondents (See the sixth paper). The respondents' beliefs of the reality and its manifestation are held true in an unrefined state, thus reflecting factual perspective on the data acquired (Alasuutari, 2001). Hence, I may state that concepts are not only building blocks of science, as discussed above, but are also meaningful descriptions of reality.

As the epistemology of concepts is concerned with studying their function in the process of adding to our knowledge, it is hardly distinguishable from the semantics of concepts. To understand better how concepts are built up we have to understand their logic. The logic of concepts has two parts: the syntax of concepts which studies their structure, and the semantics of concepts which studies their connotation and denotation (Bunge, 1967, p.46). The syntax and the semantics of concepts are intertwined, since the domain in which a concept legitimately applies is determined by its connotation.

To examine the semantics of concepts, three levels of realm are distinguished: the linguistic, the conceptual and the physical (Bailey, 2005; Bunge, 1967). At the linguistic level, the term “business model” consists of two colloquial words designating “business” as the activity of buying and selling goods and services, and “model” as a simple description of the object that might be used in calculations. In other words, our perceptions are shaped by our language (Senge, 1990). At the conceptual level, the term “business model” refers to a research construct designating concepts and propositions and their relations associated with the term. Consequently, at the physical level the term “business model” has its reference points in real world objects such as things, artefacts, people etc. Importantly, the ambiguity surrounding social objects and situations in business life emphasises the linguistic labelling of the concepts. In this thesis, I will focus on the business model concept, which belongs to the second of the levels above.

1.6 Scope and limitations

The primary aim of the study is to develop the business model as a concept free of context-specificity, in contrast to most previous studies in the business model literature. Therefore, the scope of study is not restricted to industrial sector or size of firm. While a single business model may represent the entire business in a very small firm or a start-up company, in a larger firm having many businesses,

there may be – and typically are – several business models. This means that as businesses differ, so too do business models.

The motivation behind this study was an interest in start-ups and the creation of new business. At this phase in a firm's or business' development, the concept has much potential for helping the business manager to shape, develop and assess new business concepts. Nevertheless, there is no attempt here to restrict the use of the business model concept to such conditions, even though this had been a prevailing notion throughout this research.

Examination of different businesses and their business models lies outside the scope of the present study; rather the focus is on the concept of business model and its formulation. The proposition here is that the theoretical concept remains the same, irrespective of the actual business to which it relates. In other words, when properly formulated, one single business model concept is capable of describing a range of different businesses. For instance, a single generic business model concept can be used for describing value creation within the Open Source context, just the emphasis and appearance of the elements in the business model may vary (See Seppänen, Helander, & Mäkinen, 2007).

The thesis does not attempt to generate a business model as such, but examines *the business model concept and its formulation* as distinct from the concept as a model for any particular business. Hence, the intention here is not to construct a complete business model with a hierarchical structure but rather to produce the components for use in construction. The need for such an analysis consisting of several levels became evident in the taxonomic investigation of the business model concepts (See Paper III). As a result, the present study is concerned with conceptual analysis that is based mainly on a qualitative approach.

Definition of the basic concepts has a bearing on the scope of this study. The concept definitions are based on the selected research domains. Thus, it should be noted that the study relates mainly to the strategic management domain, and more specifically to the resource-based view of the firm. In addition, entrepreneurial research (e.g. Ireland, Webb, & Coombs, 2005) and theories of the firm (e.g. Cohen & Cyert, 1965; Coase, 1937) which explain rent-generation and exploitation of organisational opportunities are both linked in the core meaning of business model concept as a value creation device (e.g. Alvarez, 2007; Park, 2005; Alvarez & Barney, 2004).

As discussed above, the RBV literature has managed to identify the so-called complementary resources in addition to the resources that fulfil the VRIO criteria (Barney, 2005) and enable a sustainable competitive advantage for a firm. Thus, the contemporary discussion and research on dynamic capabilities (See e.g. Helfat et al., 2007) are outside the scope of the present study, although is relates

closely to the RBV domain. Utilising the RBV imposes certain limitations on this work and these are discussed in more detail in Chapter 3.

In addition to dynamic capabilities, other domains of research are closely related but are beyond the scope of this study. Two modelling approaches, namely business modelling (e.g. Nilsson, Tolis, & Nellborn, 1998), and business process modelling (e.g. Joyce & Winch, 2004) are some of the approaches that have also been employed to tackle similar managerial problems. Theories of social capital (e.g. Adler & Kwon, 2002) or intangible assets (e.g. Lev, 2005) are also ignored since these are based on different theoretical domains.

1.7 Organisation of the thesis

The thesis begins with a short description of the study background and its methodological foundations. Next, the research questions, objectives, and scope of the study are presented. There then follow the summaries of the publications that form the main contribution of this thesis.

The argument of the thesis is developed in six publications that are organised in two sections, A and B. Both sections comprise three publications, the linkages of which are explained next. Together the articles form an entity in which each article attempts to build on the conclusions provided in the previous ones. Section A deals with conceptual definitions and outlines the research scheme and objectives derived from the existing literature. Section B fills the gap in the current body of knowledge identified in the preceding section.

The first paper reviews the current literature on business models and illustrates, by means of a single case study, the shortcomings of one best-of-breed business model. The second paper continues with a conceptual examination of the meanings of the business model definitions being offered by business managers. This paper highlights the perceived conceptual confusion in the business model discussion. To discover how such confusion can be resolved, the third paper develops taxonomic criteria that can be used for assessing research constructs. In addition, the authors used the developed criteria for assessing current business model conceptualisations and found that existing business model literature is substantially underdeveloped particularly at the taxa level. The third paper, therefore, suggests guidelines for further research. This research is the subject of the second section.

Section B begins with two conceptual papers. The fourth publication (Paper IV) develops a proposal to remedy the defects identified in the third paper. The fifth publication (Paper V) develops the proposed resource categorisation and demonstrates how one of the seven main resource branches can be extended to cover the third level resource category. Finally, the sixth publication (Paper VI)

assesses empirically the validity of the proposed resource categorisation. The essence of this paper is that the resource categorisation provides the basic building blocks for the further development of the business model concept.

The thesis concludes with a discussion of the results. After this, there is a summary of the research contribution and a consideration of the managerial implications contained in the results. Finally, the limitations of the study are assessed along with suggestions for future research.

2 SUMMARIES OF PUBLICATIONS

SECTION A: Defining the task

2.1 Business model concepts: A review with case illustration

This paper reviewed the literature of business models and illustrated the shortcomings of existing business models by means of a single case. In the current literature, the concepts of business models are usually based on their originating fields of business or disciplines. To advance the body of scientific knowledge, a need existed for an unambiguous definition of basic constructs for research on business models. Furthermore, it has been recently suggested that the definitions and problems associated with business models are based on flawed assumptions of either the underlying core logic or the value network.

To test the business model concept in real-life conditions, we participated in a joint development project. This project aimed at creating a new product and service concept for global markets in a network formed by three companies, a large multinational company and two smaller companies. Based on the literature review, we selected one of the existing business model concepts and used it with the company participants to build a business model for a joint offering. The research method of this study involved participant observation with extensive written documentation of the meetings and workshops.

Our case revealed that current business model conceptualizations gave only limited consideration to the development of resource- or capability-based business models. Compared to our literature review, many existing business models were adequate for illustrative modelling purposes but were of little value in the implementation phase. For instance, when the company representatives attempted to negotiate roles and responsibilities for each participant to fulfil the value proposition, the selected business model concept failed to provide help in achieving these objectives.

The selected business model concept gave reasonable guidance on configuration of the activities but provided no links between activity and capability selections and responsibilities defined in contractual agreements. This was evidently one of the weaknesses of business model concepts. The practical resolution of building offering must consider the systemic nature of the whole operation, not simply as a list of components that are needed in producing the value proposition. Moreover, it would have been helpful if there had been useful definitions as to what elements or capabilities (i.e. resources) to take into account. Therefore, another drawback of existing conceptualizations of business models was the intertwined nature of the elements and the absence of these links in the concepts. The business model conceptualizations do indeed outline some links but these

concepts provide no systemic picture of what decisions lead to which outcomes. More specifically, they fail to describe the dynamics of the changes between different elements in the models.

Despite their evident flaws, the existing concepts can be used as starting points in building new offerings since they can offer certain guidelines that undoubtedly need consideration when configuring new business opportunities. Further research should be directed towards discovering reasonable ways to define what capabilities are required and, especially, how configuration of these capabilities should be carried out. The ultimate aim should be developing a business model that can determine the causalities between different elements and how these elements can be configured to achieve a particular outcome. Future research should strive to build business model conceptualizations that can aid the selection between alternative configurations of resources and capabilities.

2.2 Gaps in definitions of a business model concept in practice and theory: An empirical study

Paper II presented an empirical study of business models concepts that examined how the practicing community views that concept. In addition, the paper compared the current state-of-the-art with the empirical results. The concept of business model had attracted only a limited amount of theoretical conceptual research for providing an unambiguous and widely accepted definition of the basic concept. The paper set out to compare various theoretical definitions of business models with the views held on the subject by practicing managers.

In this exploratory study, we designed an open-ended questionnaire with two questions and distributed it to ten participants at a seminar dealing with business models, and business and earnings logic. The respondents represented upper management from functional directors and senior vice presidents to CEO level in ten separate companies representing different industries. The first question considered a practical example of a new business idea and what would be appropriate for building a business model based on this idea in a company context. The second question asked the respondents for their views on what an ideal business model concept should contain.

The results indicated that many respondents confused the concepts of business model and business plan. In varying degrees, the model identified in their responses contained the elements of a business plan and various combinations of other elements. For instance, most of the responses consisted of practical plans on what a new idea has to accomplish as it proceeds through the various business processes in a company. One respondent actually described in detail how an idea goes through organisational processes and what questions are asked of the idea.

Almost half the respondents stressed that strategy and business models represent differing challenges and sets of tasks, as well as performing differing functions in a firm. In addition, they saw a clear distinction between strategy and business modelling and considered the business model concept as a mediator between high-level strategies and operations. In order to summarise the results, the respondents' replies were arranged into two distinct groups, one considering business models as strategy and the other considering business models as business plan.

There were two important outcomes from the second question of what a business model concept should comprise. Firstly, the respondents specified the desirable characteristics, attributes, and functions that an ideal business model concept should be able to perform. Secondly, a dynamic and processual modelling approach was advocated. Overlap with the business plan concept was evident as the responses showed. However, the responses did specify that the purpose of a business model is indeed to model a new business idea, not only to plan. This accorded closely with the criticism of a lack of causality and an absence of any dynamic, processual quality in the business model concepts.

The exploratory empirical study also shed light on the practicing community's views on the current state of business model research and provided a number of guidelines for an ideal business model concept. The most important insight of the empirical research was that the same confusion that was present in academic research also existed in the views held by the practicing community on the business model concept. This reflects the immaturity of the business model concept and explains its infrequent adoption among the practicing community. The business model concept was confused with strategy as well as with business plans. Further, a basic, unified definition of the business model concept was also called for.

2.3 Assessing business model concepts with taxonomical research criteria: A preliminary study

In this third paper, we synthesised the taxonomic criteria that can be used for assessing research constructs. We then assessed current business model conceptualizations as theoretical constructs in order to respond to the needs identified in the two earlier papers (Paper I in Ch 2.1 and Paper II in Ch 2.2). The paper showed how the criticism of current business model conceptualizations could be countered by further conceptual development of these taxonomic criteria.

A first step in assessing the constructs created is to subject the concepts to taxonomic investigation. Taxonomic study evaluates the properties of classification schemes used in categorising objects into groups, thereby focusing on general principles describing the objects of interest. Hierarchical classification facilitates the presentation of elements and the properties of phenomena under investigation in such a way that hypotheses may be developed in terms of research objects. Phenomena can also be classified, grouped and clustered in a way that facilitates comparison between them. In addition, models do not only serve as links between theory and practice but also serve as a means of communication.

The purpose of modelling is to distil reality into comprehensible constructs in order to facilitate an understanding of the phenomena under study, as well as aiding in the construction of hypotheses and theory development. The purpose of the model is to outline an appropriate and theoretically limited set of objects as well as the relationships between them. Models can be descriptive, explanatory or prescriptive. From the modelling perspective, explanatory and prescriptive models are essentially causal models describing relationships and directions of relationships between objects. Conceptual frameworks or listings of objects that differentiate research subjects from one another are not considered as models in this study since they do not perform modelling functions. These frameworks either lack hierarchy or do not describe relationships between the objects in the framework.

We based the formulation of criteria for taxonomical analysis on the basic rule of classification: The criteria formed and used for assessment must be both exhaustive and mutually exclusive. Our iterative process of formulating criteria resulted in nine criteria that constituted a two-level classification, namely, a system (i.e., the model level) and its items (i.e., the objects' level) which were defined in detail in the paper. Our final sample comprised thirteen business model constructs. This sample was considered appropriate for investigation of a new field that has wide theoretical and methodological diversity.

Earlier studies have arrived at conceptualization of various different alternative models and this has caused some confusion. However, this should not be construed as weakness, but rather as an indication that the field has progressed in terms of scientific inquiry. The field also showed signs of convergence in the basic definitions and functions of its core concepts. The results of our assessment demonstrated that current conceptualizations perform rather poorly as models, especially at the elemental level, when compared to taxonomic criteria.

Firstly, at the model level, we showed the dominance of descriptive conceptualizations of the business model. The descriptive nature of the models was no surprise in a young field. Thus, future research should focus on a more

detailed level of analysis to discover conceptualizations that go beyond a mere outline of the elements of business models. At present, many concepts only delineate a few aspects, without specifying any deeper levels in their analysis.

Most of the models in our assessment were generalizable mostly because of our initial sampling procedure and the strict criteria requiring that the studies selected should be directed to defining business model concepts at a general level. Despite this limitation, generalizability should be maintained in future conceptualizations. Contextual limitations and studies lacking a rigorous consideration of reliability and generalizability increase confusion in the field and hamper any overall understanding of the key elements in business models. Furthermore, hierarchical structuring was largely missing from our sample. A hierarchy structure for objects and the relationships between objects at different levels would result in more detailed and coherent frameworks for use in both research and practical applications.

In addition to these considerations, our assessment of collective exhaustiveness and parsimony revealed major opportunities for future research. The scant results obtained in our assessment of collective exhaustiveness were consistent with recent criticism of business model literature for being conceptually blurred and ambiguous. Our results were surprising since they highlighted the need for agreement on the conceptual grounds and definitions for the business model concept and its functions. Along with collective exhaustiveness, parsimony is an important issue that needs particular consideration in future research.

The poor hierarchical conceptualizations found in this study were also reflected at the level of taxa, where the models showed their greatest weakness. Researchers in the field should analyse the basic definitional level of the objects under study when conceptualizing business models. At the taxa level, there was an absence of mutual exclusivity and internal homogeneity in our sample. This was especially surprising since the models developed should inherently embody these criteria. However, our limited binary (yes/no) criteria did not allow for partial evaluations or degrees of criteria fulfilment. Future research could rectify this limitation.

Previous studies have been conducted mostly in isolation from the existing body of knowledge and this may have partially contributed to fragmentation in the conceptualizations. The present confusion may have also arisen from the differing terminology used in the various studies and we therefore recommend standardising the key concepts employed in earlier research. Our study illustrates that the current conceptualizations of business models do not fully meet taxonomic criteria. At the elemental level, there is much scope for future research to design relevant conceptualizations for the business model.

Further, inconsistency in business model conceptualizations has implications for management in any organisational setting. Organisations capitalizing on business model concepts in their operations should be alert to the dangers of ambiguity. Poor definitions of business model concepts lead easily to confusion in operations and activities. This might explain why the business model as a construct is often held in low regard; unclear definitions can undermine judgment and decision-making. The practical implications of the paper were that current conceptualizations of a business model were unhelpful at best and misleading at worst.

SECTION B: Developing the solution

2.4 *Towards a classification of resources for the business model concept*

The purpose of this fourth paper was to continue the discussion on the representation of resources as part of the business model concept. A business model concept was recently proposed to support managing the exploitation of business opportunities. Such exploitation generates a need to select and arrange resources of the firm in order to fulfil value creation potential and achieve competitive advantage. Although resources have been presented in a few earlier studies dealing with business model conceptualisations, the exposition and categorisation of resources remain unclear.

Prior studies of business models have treated resources by employing sets of examples, rather than examining their structure and content or attempting detailed definitions. This evolution has resulted in listings of various types of resources without consideration of their comparability. Even the broadest descriptions of resources contain different resources at varying levels of analysis. Such descriptions fail to consider the comprehensiveness or the hierarchical structure of the representation of resources. Thus, the current business model literature provides no comprehensive set of resources necessary for value creation. In the absence of any categorisation of the resources needed for building the business model, the main purpose of the business model concept remains unclear.

Categorisation is fundamental to all types of inference about objects in the world by particularising items and distinguishing them from one another. Category members at a given level share certain attributes and are distinguished from each other by differences in their attributes. Ideally, a category illuminates a relationship between the objects of knowledge, and the category system functions not simply for organising our understanding of the world but for communicating about it.

In this paper, we investigate empirically the categorisation of basic research objects. As we showed in Paper III (Ch 2.3), the taxa-level is the most underdeveloped part of the business model concept. We reviewed and identified the resources reported earlier in the resource-based view (RBV) literature, although there is an ongoing debate in the RBV literature regarding representation of these resources. The RBV literature has attempted to either list existing resources or build theoretical outcome-related classifications for resources. Earlier proposals failed to develop comprehensive frameworks to identify and distinguish resources from one another, thus hindering progress in

the field. Hence, we used a pilot case to identify areas for theory building and further development.

The contribution of the study was an empirically and theoretically based categorisation of the resources that need to be integrated as components into the business model concept. Our study showed that current business model literature has not explicitly considered the resources or the assembly of resources in exploiting business potential. This was rather surprising since business models are expressly conceptualised to design rent-generation in value delivery to customers. Evolution of the field of enquiry into business models has been hampered by confusing conceptualisations that lack any theoretical foundation in the literature. Therefore, our proposed categorisation was built on existing theoretical structures. It relied on current conceptual definitions of resource categories that facilitate communication and understanding of the entire system and its categories.

2.5 A propositional inventory of human resources for the business model concept

This conceptual paper continued the resource-based examination presented in Paper IV (Ch 2.4). In earlier studies, resources have been treated as an elementary part of the business model concept since the concept itself is designed to aid the creation of new ventures and businesses based on new ideas and technologies. This paper examines how human resources can be classified and proposes a detailed schema of human resources for the purposes of business model concept in the SME context.

Current business model literature did not deal with the detailed structures of resource configuration or assemblage as a part of value creation. Further, existing business models offer no normative guidelines for configuring resources when utilising technological opportunities. Thus, a crucial element of value creation is missing in current conceptualizations of business models. The resource considerations in business model conceptualizations can be developed further with the aid of the resource-based view of the firm.

The overall resource schema proposed in paper IV was based on the current literature. Its basic apportioning of resources begins with elementary, first-level items, which are physical, financial, legal, relational, informational, organisational, and human. Each of these items further contains components outlining second-level items that can be used in decision-making. To enable a more detailed view for the purposes of decision-making, this paper moves down to the third level to provide a detailed view of the human resources.

The paper focused on human resources since the success of an SME is mostly based on the effective and efficient use of such resources. For instance, decisions concerning business plans, recruiting, and venture capital investments illustrate their importance. For micro- and small-size firms, the scarcity of resources is a particular problem and highlights the importance of successful resources management. Moreover, as the firm grows the increase in the workforce poses different challenges for the entrepreneur, such as how to develop and coordinate the firm's resources in order to optimise them for current needs.

The proposed conceptual schema of resources based on a literature review illustrates how human resources can be classified to fulfil the purposes of the business model concept. The main criterion for human resources is that they are resources possessed by an individual. Four resource classes were distinguished: an individual's personal attributes, education, experience, and networks. These classes produced a comprehensive description of the individual (attribute), the individual's background (education and experience) as well as the individual's relationships with the surroundings. The results explain how resources can be integrated into business models and thereby facilitate value creation. Moreover, the results provide an example of how each resource branch could be expanded.

2.6 Resources in a business model concept: An empirical study

This study examined managers' perceptions on theoretically derived resource categorisation and its items that were developed for the purposes of the business model concept (See papers IV and V, Ch 2.4 and Ch 2.5). This objective was accomplished by using different samples: firstly, interviewing ten business managers representing multi-project companies from different industries, and secondly, surveying perceptions of 27 managers mainly in healthcare and related industries to complement our investigations. I employed two different samples for two main reasons. Firstly, I examined the comprehensiveness and usefulness of categorisation from the business managers' perspective. Therefore, I accomplished a round of interviews of business managers in order to ascertain their perceptions on proposed categorisation as well as to examine their opinions on resource items and their appropriateness to everyday business life. Secondly, I attempted to obtain better validation for the categorisation by using a larger sample from different industries. Due to the larger sample, I utilised the form-based approach. Since the methods for the selected sample groups are different, both cases were treated separately.

The first sample group consisted of ten business managers who were accustomed to resource discourse and represented multi-project companies from different industries such as telecommunications, software and wholesale. Different

industries were included since decisions regarding the business model are carried out similarly in general management positions irrespective of the industry. The respondents have several years' experience and represent the top-management level (e.g., CEO, Vice President) in their businesses, and educational level for most of them was a higher academic degree. The study setting was designed to provide a single case as a particular decision-making situation in which a business manager has to carry out tasks involving resource allocation, management, and communication decisions.

The second sample group comprised 27 persons representing mainly the healthcare and related industries. These group members were participating in the university's special MBA programme and this part of the study was carried out during their educational period. The respondents have several years' experience in their field and represent top-management level (e.g., doctors, CEOs) in their organisations. Most of the respondents had a higher academic degree. The study setting involved a listing of 36 resource items and a template with titles of the seven main resource groups. The resource list was in alphabetic order both in the mother tongue and in English. The respondents were asked to consider each resource item and assign it to what they deemed to be the best-suited category. For the final data set, I obtained 27 A4-sheets in which all 36 resource items were assigned to the seven main categories.

All responses were coded and summarised to yield a multinomial distribution: the respondents in both samples have assigned the same 36 resource items into seven main resource categories. Firstly, I present below the mode category for each resource item and the agreement rate between respondents and discuss the findings. Secondly, I used Krippendorff's alpha method to describe the reliability of the raters' agreements in order to distinguish differing raters and to differentiate resource items.

Overall, the study suggests that the resource categorization produced commonly shared perception on resource items that could be used in business model conceptualizations. The more detailed analysis presented above shows that the respondents in both of the sample groups perceived and therefore assigned only the following resource items differently compared to the theoretical categorisation. Common to all these resource items is, quite naturally, their wide distribution in responses: each of them was assigned three to four separate main categories, thus indicating a wide variation in the perceptions of our respondents. Furthermore, there was an interesting dichotomic distribution in three resource items, namely land, raw material reserves and real estates were all assigned either to the physical or to the financial main category. One explanation may be the well-functioning aftermarkets for each of these; even though their appearance is evidently physical, managers seem to consider them mainly as financial resources.

The results indicated that the proposed resource categorisation was, in principle, appropriate for its intended use as a part of the business model concept. More specifically, in the first sample group no fewer than 32 of 36 resource items had the substantial agreement between respondents measured by the Krippendorff's alpha. In addition, I analysed in more detail the four resource items whose assignments had the largest spread in the respondents' answers. Here I found that the items reflected a variety of perceptions according to the respondent's personal emphasis and managerial style. However, the study setting did not permit fuller examination of this phenomenon.

The results also show that most of the theoretically derived resource components have their equivalents in the business language and concepts used by managers. More specifically, in the first sample the respondents achieved the substantial inter-rater agreement, whereas in the second sample the respondents achieved the moderate inter-rater agreement on the proposed resource categorisation. I am thus able to conclude that the examined resource categorisation and its components promote further development of the business model concept and also that the categorisation improves daily communication between managers and their subordinates. Several resources need to be examined in more detail or be defined differently since their perceptions varied markedly.

3 CONCLUSIONS

3.1 *Discussion of the results*

This dissertation considers the business model concept and its resource components by means of conceptual analysis. The two broad research questions of the thesis were as follows:

RQ1: What conceptualizations for a business model concept have been proposed?

RQ2: What resource components does a business model concept include?

Several steps were taken to respond to these questions. The study began by reviewing the business model literature. I then evaluated how well the current conceptualisations work in practice. To achieve this and to illustrate the anticipated conceptual shortcomings within the practising community, I performed a single case study. In order to widen the perspective beyond the case study itself, a small study was undertaken to determine practitioners' perceptions of the concept of business model. The findings of the literature review and the views of the practising community confirmed a clear need existed for conceptual development.

The developed taxonomical research criteria enabled me to analyse the business model concept as a theoretical construct. This part of the study produced two significant outcomes. First, I was able to identify what was lacking in current business model conceptualisations. The fact that the current business model concepts fulfilled the criteria at the model level but failed at the taxa level raised the question as to how it could be solved. Second, the research criteria were developed so that they could be used in wider research, thereby providing a tool for other purposes than solely for assessing the business model concept.

The business model literature provided the direction for the next steps. Many earlier studies cited the RBV as a theoretical background, since the RBV (nowadays also known as the RBT, see e.g. Barney & Clark, 2007) is central to creating value from technological innovation (Chesbrough & Rosenbloom, 2002). I, therefore, compiled an extensive list of resources mentioned in the RBV

literature. A classification approach was adopted to make the resources more useful. An initial classification of resources was based on the seven main branches by Hunt and Morgan (Morgan & Hunt, 1999; Hunt & Morgan, 1995). A pilot case study was used to obtain initial validation for the classification. A two-level classification of resources was made based on the findings of this case. Since the resolution power of a two-level classification of resources does not suffice in all circumstances, the fifth publication discusses how the original two-level classification can be extended to a third level. These third-level resources are powerful enough for the daily needs of managers in developing and managing resources in their businesses.

The next and final part of this thesis was the empirical validation of the constructed classification. This validation process included two separate studies. Firstly, in order to validate perceptions on the theory-driven classification that provided the resource components for the business model concept, interviews were conducted with business managers regularly involved in business model decisions. Ten top-level business managers representing different industries were asked to classify specific resource concepts. The respondents were also requested to explain the reasoning for their individual classification. Secondly, to avoid bias due to the small sample size, I used a larger sample from different industry. The results of these studies show that I had obtained the commonly shared resources by means of the two-level categorisation. There were only minor deviations, which related to five resource concepts out of 36. This demonstrated that the abstraction of concepts was successful, thereby minimising losses in connotation (depth) and retaining concurrently extensional (breadth) gains (Osigweh, 1989, p.584).

3.2 Contribution of the dissertation

The study addresses a significant issue, which is crucial in both theory and practice. Its importance has been recognised in a vast number of contributions in the existing literature. For their part, practitioners continue to struggle with the ongoing need to create value and new business from innovations. The thesis contributes to the existing body of knowledge in three ways:

Firstly, the study investigates and defines deficiencies in current conceptualisations of business models, thus contributing to the discussion initiated by Shafer et al. (2005).

Secondly, the study establishes criteria to investigate research constructs. These criteria were developed into broader general research criteria that would be used in different contexts to discover how a particular research construct under study could be developed (See e.g. St. John, 2005). Thus, the study can be considered a useful contribution for researchers in the field of management studies.

Thirdly, and most importantly, the study fulfils the needs identified in taxonomic investigation by populating and classifying the resources mentioned in the RBV literature. This part of the study contributes to the business model and the RBV literature by providing a complete categorisation of resources for future research.

Taken together these contributions can be considered as furthering development in the field. The results of the study have also been published in six papers in peer-reviewed journals and conferences. Finally, the contribution made here provides a generalizable outcome because the objective of a general concept has been to the fore throughout the study. The research criteria and the resource categorisation have been developed to overcome context- and time-specificity.

3.3 Managerial implications

As the views of the business managers in studies revealed (papers I and II), there was a need for a comprehensive definition of the business model concept. This study attempted to dispel the conceptual confusion that exists in the notions of business plan and strategy. This was done by adopting the definition that emphasizes the business model concept as a managerial tool. The practical implications of the thesis are discussed below.

First, the current conceptualisations of a business model were inadequate at best and misleading at worst. With the aid of the research criteria I was able to explain the degree to which existing business model conceptualisations were found wanting. According to the study, even the best surviving conceptualisations were inadequate at taxa level, even if good at the model level. Thus, the previous conceptualisations cannot provide tools for answering practical questions such as how to implement a business model at the operational level or what components comprise the business model concept.

This study provides the resource categorisation to aid selection between alternative configurations of resources and capabilities. The categorisation clarifies practicing managers' cognitive mapping of objects by providing an inventory of resources for reference in the exploitation of business potential. Furthermore, the categorisation offers the possibility to serve as a checklist to help managers identify areas for future development in a firm. In particular, the categorisation may pinpoint potential "bottlenecks" in the current configuration.

Second, the resource categorisation improves the clarity of communication concerning the sets of resources. The managerial role adopted by an individual manager is reflected to some extent by the way in which emphasis is placed on particular resources. For instance, when a manager routinely emphasises financial issues, he may also widen his perspective to include other resources, or

ensure that he has covered all the important aspects of the business idea being developed. According to this study, the clarity of daily communication will be improved since these resources and their labelling – as components in the business model concept – are commonly shared between managers performing different managerial roles. Thus, it can be supposed from this discussion that resources, labelled as presented, should also enhance communication between managers and subordinates, who might otherwise speak about resources in different terms.

Finally, categorisation in exploiting business potential facilitates a comprehensive understanding of the resources that need to be assembled. The use of categorisation for exploiting business potential forms a link between operational-level activities and strategy-level activities (in long-term planning). This means that the resource perspective enables concurrent two-level examinations of a firm's resources: an overview of the total resources and a view of each individual resource.

3.4 Limitations and suggestions for further research

Assessment of the research involves the dimensions of reliability and validity. Here, reliability refers to the overall stability or dependability of the research results, including sampling errors and non-response bias as well as various forms of measurement errors (Alwin, 2005). Reliability is a necessary condition for validity, although virtually all social science data have measurement error (McDonald, 2005). Considering that most of the study has been conceptual, reliability is measured primarily in terms of how well the documentation of the research process is accomplished. If another researcher can reach similar conclusions with the same data, it can reasonably be supposed that the study in question has been adequate in terms of reliability.

Validity can be evaluated in greater detail in terms of the following types: internal validity, external validity, and construct validity. As Yin (1994, p.33) reports, internal validity is the concern of explanatory or causal studies. However, since the present study is explorative rather than explanatory, this type of validity is discussed no further. External validity concerns generalisation across time, settings and individuals, whereas construct validity is concerned with the validity of the theoretical frameworks and the concepts used in a particular study (Scandura & Williams, 2000). The latter two types of validity are assessed in the following paragraphs.

In selecting a particular method for a study, certain limitations inevitably result. In this thesis, the admixture of qualitative and quantitative approaches prompts the question as to whether its results are based on similar philosophical premises. However, the nature of the main research questions justifies the usage of both

approaches. As business model research evolves, qualitative research needs to be supplemented with quantitative study, as was demonstrated when validating the proposed categorisation (Paper VI).

Another methodological limitation arises from the act of categorising that was performed. Categorising resources as components for the business model concept inevitably involves contextual choices. Although the primary aim here has been the creation of a context-free categorisation, it is impossible not to convey certain built-in premises. In this thesis, the conceptual premises are mostly associated with the purpose of the business model concept, and with the selected theoretical domains. All concepts contain two salient elements: 1) what a concept applies to, and 2) what objects a concept entails. At the outset of this study with the adoption of the definition by Chesbrough and Rosenbloom (2002), the applicability of the business model concept was already restricted. Therefore, the study focused on the second element, in defining and categorising the objects (resource components) entailed by the business model concept.

In addition, limitations in labelling resources have an effect on categorisation and this I tried to overcome in two ways. First, the respondents were asked to categorise the resources under one of seven main categories using a paperclip technique. This involved more than just linguistic activity in the categorisation process. Second, the respondents were asked to verbalise their thoughts to help the researcher identify the interpretation made on each resource. Despite these precautions, however, possible conceptual misunderstandings cannot be ruled out. Future research could employ different methods to confirm the results obtained here or to continue developing and testing the categorisation along the lines of this study.

A further limitation concerns the data used in the study. The review of the literature was confined to the RBV and business model literature; other possible domains (See scope, in Chapter 1.6) were deemed to lie outside the scope of this study. This has also had a bearing on the concepts utilised here. In addition, empirical data was collected using several data gathering processes. The study employed a case study twice as well as two small-scale surveys. The reasoning behind the selection of the two cases was described in the publications concerned. The aim of these case studies was not to generalise the results but to provide the contextual framework for the conceptual development of business model. In the surveys, the first questionnaire (Paper II) sought to identify the conceptual confusion already found in the literature review. This corroborated the theoretical findings. Finally, in validating the proposed categorisation with two samples of business managers (Paper VI), the initial purpose was to validate its structure and the labelling used. Although the selected group of the business managers was not limited to any single industry, it was nevertheless restricted to particular respondents. Both samples were large enough since the inter-rater

reliability between the respondents was the topic under investigation. However, future research could utilise a larger sample to confirm the results statistically.

Since contemporary management largely concerns how time is managed, the temporal dimension of the business model concept is crucially important. Nevertheless, since this thesis deals with the conceptual development of the business model concept and identifying and validating missing components for the concept, the temporal dimension lies beyond its scope. The RBV imposes limitations on the temporal perspective because it typically depicts resources as static elements that can be used for explaining a firm's competitive advantage. Future research could focus on managing and developing aspects of a firm's resources using, for instance, the theory of dynamic capabilities (See e.g. Helfat et al., 2007). Initial ideas on how to combine this resource approach and a dynamic capabilities approach in the context business model have already been proposed in a separate paper (Mäkinen & Seppänen, 2006).

Certain limitations apply to the results of the dissertation. Overall, the categorisation was limited in that it did not explicitly consider hierarchical structures or detailed-level resource components. Nevertheless, the study's contribution was an empirically- and theoretically-based categorisation that creates an inventory of resource categories. This approach adds to our knowledge. For instance, present research on creating typologies of business models has failed to fully explain why business models in different classes succeed in different ways: "*We can only provide some educated hypotheses about what could explain these.*" (Malone et al., 2006, p.23) The proposed categorisation allows for the development of a hierarchical classification of individual resources and identification of their essence. The current two-level categorisation could be extended to a third level, as proposed in the fifth publication (Paper V). A more fine-grained categorisation will be needed to achieve the level of resolution suitable for use in practical decision-making. As proposed in Paper V, in the third level we reach a point that permits the managing and developing of resources.

Future research could also develop links between resource components to obtain an actual model. The third-level resources can expose these relationships between resource categories and therefore enable development of a model to explain the type of outcome to ensue from a particular initial state. In this study, the taped interviews in which managers verbalised their thoughts provide additional data that can be used later for constructing the relationships between resource components.

A feature of the developed categorisation is that it forms an unambiguous system. Frequently a resource component is closely associated with several main branches but it can be assigned to only one single category. Therefore, varying shades of grey in respondents' perceptions of resources were somewhat

artificially transformed into black and white dichotomies. It would result in a more realistic picture if the distribution of perceptions for a particular resource would be identified. It was of course possible to determine the distribution between respondents when their classification differed from each other. However, with the classification technique used in collecting the data, it was not possible to provide a distribution for each resource component for each respondent. However, an attempt was made to tackle this by audiotaping the respondents as they verbalised their thoughts. This partially revealed the way in which the respondents deliberated over the assignment of a particular resource to its category. Thus, further research should attempt to utilise these findings and create links between these closely related resource components, as discussed above.

In conclusion, this study paves the way for the theory-building phase of research into the business model concept. Future studies should investigate and adjust the details of the proposed categorisation and its structure. They should also test more thoroughly the categorisation and its applicability to multiple case studies. In addition, future research should investigate the linkages between resources and strategy, as well as between resources and operational activities. Finally, future research could examine in detail the usage of individual resources, the relationships between resources, the assembling of resources and the impact this has on the success of value creation. It is hoped that the present study will lay the ground for further advances in the field to build theoretically sound, unified and measurable conceptualisations.

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Part Two

PUBLICATION I

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