Towards classification of resources for the business model concept

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ABSTRACT

The purpose of this paper was to continue the discussion on the representation of resources as a part of the business model concept. Recently, a business model concept has been 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 the value creation potential and achieve a competitive advantage. Although resources have been elucidated in this young field of enquiry concerning business model conceptualisations, the exposition of and the categorisation of resources have been left ambiguous. The contribution of this study is an empirically and theoretically grounded categorisation of the resources that need to be combined with business model concept in order to exploit rent-generation potential.

Keywords: business model, categorisation, resources, resource-based view, classification, rent-generation, exploitation, value creation

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INTRODUCTION

Organisations in competitive markets are continually exploring new ideas and ways to exploit these ideas to better operate and thrive in a dynamic environment. The balance between exploration and exploitation is vital to organisational survival (March, 1991). The exploitation of a business opportunity generates a need to select and arrange the resources of the firm in order to fulfil the value creation potential and achieve a competitive advantage (Wernerfelt, 1984, Noda and Collis, 2001). Consequently, resources have been considered to be essential firm-level attributes (e.g., Denrell et al., 2003). Recently, a business model concept involving the design of transaction content, structure, and governance has been proposed to assist in managing the exploitation of business opportunities (Amit and Zott, 2001).

The business model concept encompasses those resources that a firm has access to (e.g., Betz, 2002, Venkatraman and Henderson, 1998, Weill and Vitale, 2001, Osterwalder and Pigneur, 2004). According to the resource-based view (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 by exploiting a business opportunity (Peteraf, 1993, Conner, 1991,;Hall, 1992; Barney et al., 2001). Similarly, a single resource can also create sustainable competitive advantage (Barney, 1991). Although the resources have been elucidated in current business model conceptualisations, explanations of the resources and the structures of the resource compositions have remained ambiguous (e.g., Morris et al., 2005; Osterwalder and Pigneur, 2004). As a result, the business model conceptualisations fall short of assisting firms in assembling the resources necessary to exploit business opportunities for value creation.

The purpose of this paper is to contribute to the discussion concerning the representation of resources as a part of the business model concept. We identify the resources reported earlier in the RBV literature, although there also exists an ongoing controversy in the RBV regarding the comprehensiveness of its representation of these resources (e.g., Barney, 2001; Priem and Butler, 2001a; Priem and Butler, 2001b). Hence, we use a pilot case to uncover areas for theory building and further development (Voss et al., 2002). The paper contributes to our understanding of the representation of resources that need to be assembled into a business model concept in order to exploit rent-generation potential.

The paper is structured as follows. First, we present an overview of the resources found in the current business model literature and summarise the findings. Next, we intertwine the theory with the practical case to find emerging issues from this underdeveloped field. The revised version of the developed categorisation actually emerged from the study itself in consultations with the relevant literature that were guided by these emerging issues (Suddaby, 2006). Whilst the theory would normally appear before the data presentation, we report this study in a non-traditional way in order to enhance the reliability of the results. Finally, the paper outlines directions for future research and discusses practical implications of the developed categorisation of the resources.

THEORETICAL BACKGROUND

The concept of the business model has its origins in the strategic management (Prahalad and Bettis, 1986, Chandler, 1962, Hedman and Kalling, 2003, Amit and Zott, 2001) as well as technology management literature (Tripsas, 1997, Henderson, 1994). The concept has rapidly evolved over the past decade, during which a number of different conceptualisations have been proposed. Throughout this evolution, the concept has been delineated by various definitions as residing in the realm of value creation, value capturing and value appropriation, though these definitions themselves have had different emphasis (Chapman et al., 2003, Betz, 2002, Hedman and Kalling, 2003). Despite these differences, it is widely accepted that the business model provides a link between value capturing and value creation, as well as aids in designing transaction content, its structures and governance in the exploitation of business opportunities (e.g., Betz, 2002; Chesbrough and Rosenbloom, 2002; Amit and Zott, 2001). As a focusing device, the business model concept typically consists of objects from both the demand and supply side, such as the resources of a firm, value proposition, market characteristics and revenue model (Afuah, 2004, Osterwalder and Pigneur, 2004, e.g. Davenport et al., 2006).

One aspect essential in exploiting the business potential for economic value creation is the resources that are available to the firm, as well as the allocation and the assemblage of these resources. By definition, resources are considered to comprise *"all assets, capabilities, organisational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness"* (Barney, 1991). The appropriate utilisation of resources that are valuable, rare, imperfectly imitable and non-substitutable can create a sustainable competitive advantage that cannot be copied by competitors (Barney, 1991). Moreover, if a firm can configure a bundle of general resources at its disposal in a unique way, it may achieve a sustainable competitive advantage (Peteraf, 1993, Barney, 1991, Conner, 1991, Hall, 1992, Barney et al., 2001). Similarly, the importance of assembling bundles of resources has been emphasised in the business model conceptualisation (Amit and Zott, 2001). Managing the allocation of and arranging the resources in the exploitation of business potential is therefore central to the survival of a firm.

The company needs to assemble the resources at its disposal to utilise business potential; however, all needed resources must first be identified and assessed to understand which resources the firm may have at its disposal and what it still needs to acquire. In addition, these resources need to be assembled in a manner that gives structure to the exploitation of the business opportunity. This is the definitional ground of the business model concept in the contemporary literature (Hamel, 2000, Morris et al., 2005, Osterwalder and Pigneur, 2004, Afuah, 2004, Mäkinen et al., 2005). Hence, the representation of the resources in the business model concept needs to be carefully explicated. Table 1 presents a summary of the resources presented in the current business model literature.

Table 1. Resources presented in the business model literature.

Author(s)	Resources
(Hamel, 2000)	Strategic assets (brands, patents, infrastructure, proprietary standards, and customer data)
(Timmers, 2000)	Brand image, time-to-market, lower cost base, market share and access to markets, customer orientation, quality, customer loyalty, functional integration, network integration, innovation orientation for products and services and to create new business models
(Afuah and Tucci, 2001)	Tangible (plants, equipment, cash reserves), intangible (incl. patents, copyrights, reputation, brands, trade secret, relationships with customers, relationships with employees, and knowledge embedded in different forms such as databases, market research findings), and human (incl. skills and knowledge)
(Amit and Zott, 2001)	Bundles complementary strategic assets to create value, i.e., brand name, and buyer-seller trust
(Lee, 2001)	Physical (raw materials or intermediate goods) and virtual (data or information)
(Rayport and Jaworski, 2001)	Physical (e.g., warehouses), and intangibles (e.g., brand name, patents), also activities
(Hedman and	Physical, human, and organisational

Kalling, 2003)	
(Afuah, 2004)	Tangible assets (e.g., plants, equipment, cash), intangible assets (e.g., patents, brands, copyrights, trade secrets, market research findings, relationships with customers and vendors, and knowledge in databases), and human (e.g., skills and knowledge), also skilled scientists, brand-name reputation, geographic location, client relations, receivables, and distribution channels
(Chung et al., 2004)	Brand equity, organisational systems, relationships, and network ties
(Osterwalder and Pigneur, 2004)	Tangibles (. plants, equipment and cash reserves), intangibles (patents, copyrights, reputation, brands and trade secrets), and people-based skills

The previous studies on business models have treated the resources using sets of examples, rather than delving into their composition and content or their detailed definitions (Morris et al., 2005). This evolution has resulted in listings of various types of resources without considerations for the commensurability of the mentioned resources. Even the broadest descriptions of resources contain different resources at different levels of analysis without considering the comprehensiveness in scope or hierarchical structure of the representation of resources. Thus, the current business model literature has yet to identify a comprehensive set of resources necessary for value creation. Without a categorisation of the resources that need to be assembled for building the business model, the main purpose of the business model concept remains ambiguous.

METHODOLOGY

Categorisation is fundamental to all types of inference of the objects in the environment by particularising items and distinguishing them from one another (Edwards, 1991). Category members at a given level share some common attributes and are differentiated by dissimilarities among many other attributes (Dutton and Jackson, 1987). 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. Consequently, due to theoretically limited representation of resources in the business model concept, we carry out an empirically driven enquiry of the categorisation of basic research objects.

Pilot research is recommended to further the field of enquiry in its exploratory phase (Kerssens-van Drongelen, 2001). Thus, to extend our understanding of the resources to be considered as components in the business model concept, we use a pilot case to uncover areas for theory development (Voss et al., 2002). This enables us to investigate a phenomenon that concurrently places controls on the research process as rigorously as possible, as suggested, e.g., by Yin (1994). This setting offers us a rich view of the empirical environment in which the resources are utilised, assembled and cognitively organised. We employed interviews in an intertwined research process in which the theoretical basis was oftentimes questioned and further developed with emergent issues arising from the empirical findings of the interviews. Although such an iterative research process is vulnerable to the risk of losing its credibility, we attempt to overcome this by following the four requisites of rigor, namely controlled observations, controlled deductions, generalizability, and replicability (Meredith, 1998).

In order to exclude extraneous variables from our observations, we selected a micro-sized company that was readily accessible to researchers. Its small size ensured that its variety of resources would be manageable and visible, thus presenting an approachable and researchable object. The researchers have previously dealt with the case company in a number of occasions and were already familiar with its general history and recent evolution. We controlled our deductions by carefully recording the interviews and preparing transcriptions of the recordings for subsequent detailed analysis. In addition, we attempt to explicate the controllability of our deductions by citing the respondent's answers in order to demonstrate how we reached our deductions. We approach the generalizability of our results through controlled deductions and their descriptions as well as by examining the appropriateness of the resulting categorisation. The appropriateness of the categorisation is assessed through a search of the cognitive connotations of managerial sense-making of the resource objects at the category level and their positions in the category system. Finally, we pursue replication logic through detailed description of our research process, in addition to the description of the deductions.

The case-company, founded in 2001, is a very small IT-oriented firm, which is still owned and operated by its founders. The firm develops applications and procedures for capturing and sharing tacit knowledge in the form of multimedia. Their mission is to enhance the usage of expertise in the client organisation, with the aim off helping its customers to share the knowledge of their experts, thus facilitating quick and efficient organisational learning and knowledge utilisation. The firm also promotes thesharing of best working practices and promoting a uniform way of operation across the entire organisation. Their client base includes major corporations in diverse industries, public organisations, and educational institutions. The firm utilises its critical and very scarce resources to good effect in comparison to its much larger competitors and has been very successful since its outset. It has won several competitive biddings against larger, more established rivals, even though the firm has grown only on cash-flow financing. It is also noteworthy that their strength in these biddings has not been only the price but also pedagogical and technological expertise.

Interviews were involved a single respondent who was interviewed in order to gain a deep understanding of the case company. We decided to control our observations using a single respondent, since the interviewee is the only one of the three core personnel that has a comprehensive view of the functions and the operations of the case company. Our interviewee was the co-founder and Director of Business Development / CEO, having a long experience in the industry.

We conducted two rounds of interviews which were temporally separated from one another in order to control for cognitive alignment between the researcher and the interviewee. The first interview was divided into two parts. The first part lasted for three hours and focused on the company's evolution and historical developments since its foundation. The interview followed a semi-structured form in which operations, functions and the activities of the firm were carefully discussed, paying special attention to resources. The point of view was the company itself rather than on the theoretical structures. This first part of the interview provided a natural training and familiarisation, in a cognitive sense, for identifying and situating the resources of the firm, in addition to providing opportunities for triangulation of emergent issues later in the research process. The latter part of the first interview was also a semi-structured interview and lasted for two hours. The starting point for this part of the interview was the initial theoretical categorisation of resources that we had developed based on the literature. Both the initial theoretical categorisation and each resource category were examined by the interviewee who considered both the content and the descriptiveness with respect to the case company and its operations.

Prior to the second interview, the initial theoretical categorisation was revised and the revised version of the categorisation was sent to the interviewee a month after the first interview.The second interview was held a week later and lasted one hour. In this phase, the appropriateness and comprehensiveness of the resource categorisation were assessed at the system level and category level. The appropriateness was assessed by asking the interviewee to divide all the resources of the case firm into the revised categories, and the comprehensiveness of the categorisation was assessed by whether the interviewee had troubles in finding a category for all possible resources.

RESEARCH PROCESS AND RESULTS

First interview: initial theoretical categorisation

Our literature search for the resources of the business model were as disappointing as those reported earlier in the literature (Morris et al., 2005, e.g. Betz, 2002, Shafer et al., 2005). Therefore, we turned to the resource-based view (RBV) of the firm, even though the categorising of resources is still far from complete in the current RBV literature (Priem and Butler, 2001a). Nonetheless, the RBV provided us with a sound and tested grounds for our considerations, since resources "… *are firm-level attributes – abandon that, and the whole point of the RBV is lost.*" (Denrell et al., 2003). Initially, we developed a preliminary inventory of all possible resources to be included for consideration. We conducted an extensive literature review on the RBV covering all top strategic management journals. To ensure the relevance of our sample, we sought scholarly papers from journals established and verified in the earlier literature (following Boyd et al., 2005, Tahai and Meyer, 1999).

From this preliminary inventory, we formulated an initial theoretical categorisation of resources for the concept of the business model by classifying resources into physical, financial, and intangible resources (Chatterjee and Wernerfelt, 1991). For the categories of intangible resources, we adopted the classification of Fernández *et al.* (Fernández et al., 2000), which was complemented by the resources presented in the literature (e.g. Barney, 1991, Hall, 1992, Schoenecker and Cooper, 1998, Mahoney and Pandian, 1992, Galbreath, 2005) Eventually, our initial theoretical categorisation encompassed at the highest level intangible, physical and financial resources. Under intangible resources, we grouped the relational, technological, organisational and human capital resources. At the lowest level, we identified a total of 52 different resources. With this essentially two-level draft, we were then able to begin assessing the content and the descriptiveness of the initial theoretical categorisation with the case company in the first interview (See Appendix 1).

The first part of interview, focusing on the historical development and evolution of the company since its founding, was utilised for triangulation of the respondent's answers in the second part of interview, as well as for analysing transcripts of interviews. The second part of the first interview assessed the initial theoretical categorisation as a whole. The basic division into tangible and intangible resources was clear, and such an approach was easy to accept, even intuitively. As the interviewee stated:

> *"This is one, easy way to piece together a full picture, and it allows us to get a grip on matters, enables us to focus on comprehensive issues and to focus specifically on those issues."*

However, something disturbed the interviewee. The first signal of this became evident already from the start when presenting the initial theoretical categorisation. Subsequently, the interviewee was intrigued by and interested in contemplating the comprehensive representation. Especially troubling was the overly complicated structure which the interviewee commented on as follows:

> *"Well, there is…yes there is…extensively, all kinds of…don't just immediately find anything, that would…be missing or be too much or…or maybe it should be at least a little…"*

When considering individual resource categories, the interviewee questioned, for example, the content of and the placement of geographic location within the physical resources category and whether the firm's environment is already included within the geographic location? This spurred a further discussion on the definitional grounds of the resource concept and, after some mutual deliberation on the above-mentioned definition, the interviewee eventually accepted its placement.

Next, the resource categories of organisational and human resources were reviewed. Here, the interviewee was concerned that it was not clear which databases should be included as an organisational resource, which led to a general discussion on human resources. The structure appeared somewhat troublesome, although the resource categories were distinguishable and understandable as such.

> *"Yes, I can separate knowledge and intelligence…hmm…no, I can't, let's say that I question some terms in this or…it's difficult to…sort of... I see how those connect, in general understand how they could be in this class."*

Because the structure of an initial theoretical categorisation remained unclear, it at the same time obscured how a single resource should be defined. Although the individual items were descriptive, the comprehensive structure remained vague, thus causing individual items to be reconsidered. Therefore, the interviewee has to make focusing questions concerning training and experience such as:

> *"…like, it is a bit like…experience and…like … it is…training is more like a system, but still. What do you mean by this and what this does, as resource…this is what?"*

Similar confusion also existed when considering the intellectual capital.

> *"What about this then, it can be an individual's, hmm, intellectual capital, or team's. It is born, such as, not from culture, but from ways of acting…together…like, is it included somewhere?*

When the interview proceeded, a new version of categorisation started to emerge from the discussions to replace the initial theoretical categorisation because of its unclear overall structure. The discussion revolved around issues such as the education and the experience, pondering, for example, the type of resources an employee may have in the recruiting phase, and how these resources develop later on as the employee gains more experience and further skills. For instance, intelligence and skills are very different types of resources. Several other concepts were also discussed and considered, including ambition, willingness to work, and motivation, as well as whether these are resources at all. Nevertheless, a consensus with the interviewee was reached outlining three main branches under human resources: training (i.e., educational resources), talents (i.e., personal attributes), and skills (i.e., experiences and know-how).

> *"Could these be divided…like into three main classes? That one would be training, like skills gained through formal training,…and the second one would be something such as capability or capacity of an individual, where intelligence and stuff like that would reside, and another one could be something like managerial skills, relationships, etc., such as social skills?"*

In general, the interviewee's comments were well in line with, for example, Andersen and Kheam's findings (Andersen and Kheam, 1998) suggesting that general disagreement can arise surrounding intangible resources, but is less likely when considering physical or financial resources. The interviewee found the initial theoretical categorisation system interesting and understood its applicability to support decision-making, communication, and for managing value creation and resource configuration. However, the structure of the initial theoretical categorisation system based solely on the existing literature was not usable as such and clearly needed significant revisions. For example, human resources proved problematic and needed further consideration.

Revised version based on issues emerging from the first interview

After the first interview, we addressed the emergent issues and revisited the theoretical literature. In addition, the first part of the interview, which concerned the case company's evolution and its resources, was very helpful in developing a revised version of the categorisation. The transcriptions detailed the company's resources and enabled us to triangulate and develop our ideas that addressed these emergent issues.

As a result, we propose the following categorisation of resources for the business model concept (Figure 1). Our resource categorisation initially divides resources into seven groups: physical, financial, legal, relational, informational, organisational, and human (Hunt and Morgan, 1995, Morgan and Hunt, 1999). Each of these groups further consists of resources that can be used in decision-making. The resulting 36 resources and their links to the existing literature are described in the following paragraphs. Evidently, each resource category in Figure 1 includes further sub-levels and objects;However, these lower-level objects are neither examined nor categorised in the present study.

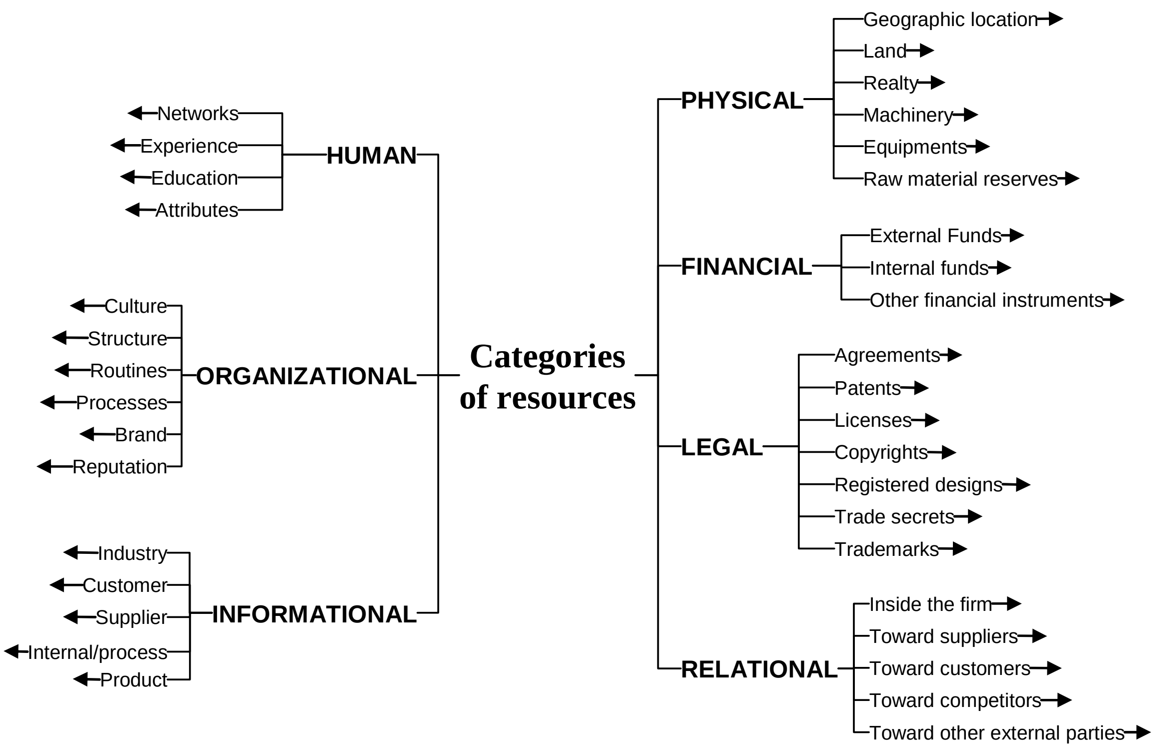

Figure 1. Categorisation of the resources for the business model concept.

Physical resources refer to those assets pertaining to geographic location (Chatterjee, 1990, Hart and Moore, 1990), land (Galbreath, 2005, Chatterjee and Wernerfelt, 1991), realty (Galbreath, 2005, Morgan and Hunt, 1999, Chatterjee, 1990), machinery (Chatterjee, 1990, Hart and Moore, 1990, p.1150), equipment (Wernerfelt, 1984, Amit and Schoemaker, 1993, Barney, 1991), and raw-material reserves (Morgan and Hunt, 1999). Geographic location also includes the amenities at locations that are accessible to the firm.

Financial resources represent the total share of capital that a firm has at its disposal. These comprise external and internal funding (Chatterjee, 1990, Chatterjee and Wernerfelt, 1991), and other financial instruments, including the balance sheet valuation of such resources as goodwill and brand name (Hall, 1992, Hart and Moore, 1990, FASB, 2001).

Legal resources encompass the firm's assets that are afforded legal protection through property rights. These are composed of patents (Amit and Schoemaker, 1993, Grant, 1991, Hall, 1992), licenses (Amit and Schoemaker, 1993, Hall, 1993, Hall, 2000), copyrights (Fernández et al., 2000, Hall, 1992, Hall, 1993, Hall, 2000), registered designs (Galbreath, 2005, Hall, 1992, Hall, 1993), trade secrets (Hall, 1992, Hall, 1993, Teece et al., 1997), trademarks (Galbreath, 2005, Grant, 1991, Hall, 1992), and agreements (Hall, 1992, Miller and Shamsie, 1996, Wernerfelt, 1984) such as different types of contracts, letters of disclosure, preliminary contracts, and letters of intent.

Relational resources include those relationships that an organisation has between various constituencies. These relationships can be within the organisation (Morgan and Hunt, 1999) as well as between the organisation and its vendors, customers, competitors and various external parties, constituents, and stakeholders (Hall, 1992, Amit and Schoemaker, 1993, Srivastava et al., 2001, Hall, 1993, Madhok and Tallman, 1998)

Informational resources consist of collective, explicitly expressed knowledge that can be stored, for example, in a firm's databases or by other means. This category encompasses the information at the industry-level, associated with a firm's customers, with its suppliers, and with internal processes and products (Fernández et al., 2000, Hall, 1992, Hall, 1993, Knudsen and Madsen, 2002).

Organisational resources comprise those assets possessed independently by the firm and which do not belong to an individual person. It consists of corporate culture and climate (Barney, 1986, Hall, 1992, Hall, 1993, Morgan and Hunt, 1999), the structure of an organisation (Barney, 1991, Galbreath, 2005), the organisation's routines (Barney, 1991, Grant, 1991, Wernerfelt, 1984), efficient processes or procedures (Hall, 2000, Morgan and Hunt, 1999), brand (Chatterjee and Wernerfelt, 1991, Grant, 1991, Morgan and Hunt, 1999), and reputation (Andersen and Kheam, 1998, Hall, 1992).

The human resources category attempts to produce a comprehensive picture of the employee (personal attributes), the employee's background (education and experience), as well as the employee's relationship with his/her surroundings (network). Human resources are divided into the categories of personal networks (Hall, 1993), experience (Colombo and Grilli, 2005), education (Chatterjee, 1998, Barney, 1991), and personal attributes (Naman and Slevin, 1993).

Second interview: assessing the appropriateness of the revised, emerged categorisation

The purpose of the second interview was to assess the appropriateness and the comprehensiveness of the revised categorisation of resources that need to be incorporated into the business model concept for exploiting rent-generation potential. The revised three-level categorisation was received with satisfaction and especially the interviewee commended the clarity of the structure of the categorisation. Based on the interviewee's comments, it appropriately describes the resources:

> *"This is excellent…this seems serviceable…at least nothing is missing" …"quite sensible…"*

The appropriateness of the categorisation had improved since the earlier version, and the interviewee could immediately envision several applications of the categorisation for his work. He also asked permission to use the categorisation for his own company's internal development, and when asked, his interest was specifically to have a checklist to organise ideas and thoughts.

"This serves as a checklist, bottlenecks can be conceived, these can be picked up one by one and see what needs to be developed further, organise matters inside ones head into a form that…"

The interviewee carefully examined the revised categorisation and felt that the resource categories are represented comprehensively. This is revealed in statements such as:

"You can see the relationships between matters" …

"This can be viewed as an entirety or as individual items, and reflect on how it relates to others and what kind of linkages it has…"

At the very end of the interview, a compelling issue supporting the premises of the RBV emerged. Although the interviews and the categorisation operate with resources and are close to the actual operations of a firm, the interviewee saw a clear link to an organisation's strategy and as a final conclusion stated that:

"This makes you want to disentangle, open up the items, to see if you could find a strategy in there…"

Therefore, in conclusion, the revised categorisation received positive feedback concerning its appropriateness and comprehensiveness, and was deemed a practical framework by the interviewee.

CONCLUSIONS

This study offers a comprehensive representation of the resources that should be considered as an essential element of the business model concept. Our study shows that the current business model literature has not explicitly considered the resources or assembly of resources for exploiting business potential. This is rather surprising since business models are explicitly conceptualised to design rent-generation in value delivery to customers.

Evolution of this field of enquiry concerning business models has been hampered by the confusing conceptualisations that lack a theoretical foundation in the literature (e.g., Shafer et al., 2005). Therefore, our proposed categorisation relies on current conceptual definitions of resource categories that facilitate on the expansion of existing theoretical structures, as well as communication and understanding of the system as a whole and of its categories. However, this study is limited in that it does not consider hierarchical structures nor detailed level resource objects. Nonetheless, we were able to build an empirically and theoretically grounded system of categorisation that creates an inventory of resource categories.

As our case-study suggests, our categorisation of the resources has many practical uses. First, the categorisation brings clarity to a practicing manager's cognitive mapping of objects by introducing an inventory of resources to be considered in the utilisation of business potential. Second, the categorisation improves the clarity of communication concerning sets of resources between actors in situational arrangements. Finally, categorisation in the use of utilising business potential facilitates comprehensive understanding of the resources, as a whole, that need to be assembled. The use of categorisation for exploiting business potential forms a linkage between operational-level activities and strategy-level, long-term planning.

The development of the proposed categorisation was carried out by a single in-depth case study;

thus, the setting of our study could have created several sources of error and bias, including case selection biases, respondent biases, and biases or errors in the interviews. We attempted to minimise these by recording and carefully transcribing the interviews, as well as cautiously analysing the observations. However, it has to be recognised that not only different people, but even the same people can offer different views of the same phenomena, since cognitive models are idealised, and not specific to actual instances (Edwards, 1991, p.533). Nonetheless, our description of the research process, the controls implemented for attaining the results, as well as the justification for a single-case study at this stage of the evolution in this field of enquiry lends confidence to the resulting categorisation.

Our study paves the way to the theory-building phase in research on the business model concept. Further research should be targeted at examining and adjusting the details of the proposed categorisation and its structure, in addition to more thoroughly testing the categorisation and its applicability with multiple case studies. In addition, future research should address the linkages between resources and strategy, as well as between resources and operational activities. Finally, future research could further study the usage of the individual resources, the relationships between resources, and the assembling of the resources and its impact on the success of value creation.

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APPENDIX 1.

An initial theoretical categorisation.