BUSINESS MODELS:
CHANGE OF SCOPE AND SCOPE OF CHANGE

Lars Bankvall
Industrial Marketing
Chalmers University of Technology
email:lars.bankvall@chalmers.se

Anna Dubois
Industrial Marketing
Chalmers University of Technology
email: anna.dubois@chalmers.se

Frida Lind
Industrial Marketing
Chalmers University of Technology
email: frida.lind@chalmers.se

Abstract

The literature on business models has grown in recent years following new Internet-based business opportunities. Over time, the suggested conceptualisations of business models have also become more general. In this paper we aim at scrutinising the business model literature in relation to the industrial network approach in order to (1) point at problems inherent in current conceptualisations, and (2) suggest a framework that supports analysis of change or development of business models in view of network embeddedness.

When problems inherent in current conceptualisations are concerned we discuss three issues; (1) their focus on the firm as the main unit of analysis, (2) the mixing of theoretical assumptions, and (3) their static nature. Moreover, most current conceptualisations set the focus on the selling firm's perspective and thus focus on *making* and *selling* but do not include *buying* and *using*. As a result, network level aspects of business models are rare.

In contrast to firm-centred approaches suggested by other authors, we suggest a focus on the 'offering' as the focal element of business model analysis. We identify three categories of change with regard to offerings and suggest an approach to analyse the consequences of such changes in terms of emerging business models.

Keywords: Business models, offerings, division of labour, ownership

Competitive paper

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INTRODUCTION

In recent decades, business models have received increasing attention from academics as well as practice as a way of expressing the business logic of firms and markets. According to most authors who make suggestions of how to conceptualise business models, there is a lack of agreement on the definitions of the concept (see e.g. Mahadevan, 2000; Chesbrough and Rosenbloom, 2002; Morris et al., 2005; Zott et al., 2011). Moreover, a common claim is that the conceptualisations are not theoretically grounded (Hedman and Kalling, 2003), and that when change of business models is concerned there is a need to learn more about "the forces that facilitate and impede constructive adaptation in the elements of an extant business model" (Chesbrough and Rosenbloom, 2002: 552).

In a recent paper, Coombes and Nicholson (2013) argue that business models have received very little attention from marketing scholars. In particular they suggest that the IMP Group's focus on interaction and networks could make distinctive contributions to the business model literature: "The focus within that perspective on the embeddedness of action and relationships across time also offers the potential to develop dynamic open-business models that evolve over time and which are not fixed and static entities (a point recently advanced by Mason and Spring (2011)" (Coombes and Nicholson, 2013: 8).

According to Mason and Palo (2012) a key limitation of the main body of business model literature is that it creates a description of the firm at a single point in time and that it fails to consider the influence of the business network. Moreover, Mason and Spring (2011) argue that it fails to show the power of business models to bring about change in business networks. Hence, most conceptualisations present firm-centred and static descriptions of business. An explanation to the focus on firms and their business models may be the massive use of the term to explain the business logic of new web-based ventures during the Internet boom in the 90's. However, while most general conceptualisations of business models focus on the firm in relation to a general 'market', Mason and Spring (2011: 1032) point at the use of business models in Internet-based businesses in which "firms were being understood from the outset in terms of their position and role in business networks". In this paper we will build further on the notion of business models as embedded in wider industrial network settings. As a consequence, *change* in business models become of particular interest since companies are assumed to be embedded in networks at the outset and no changes can be made without consequences for their counterparts and the business relationships in which they are involved. The aim of the paper is to scrutinise current conceptualisations of business models and to suggest a framework for analysis of change or development of business models in an industrial network setting.

The paper is structured as follows. First, we discuss current conceptualisations of business models in terms of: (1) what they consider business models to be, (2) what components they involve, (3) their theoretical underpinnings, and (4) how they capture change. Second, taking a starting point in how offerings are embedded in wider technological systems and networks of actors, we suggest a framework for analysis of change of business models. Third, we identify and discuss principal change dimensions and the rationales and consequences of such changes. Finally, we present a concluding discussion wherein we make suggestions of further research on business models and point at some managerial implications.

CONCEPTUALISATIONS OF BUSINESS MODELS

What is a business model?

Based on a literature review, Zott et al. (2011) conclude that there is no general agreement among scholars on what a business model is. They identify four common themes: (1) business models emerging as a new unit of analysis; (2) business models emphasising the system level, i.e. holistic approaches to explaining how firms "do business", (3) firm activities playing an important part in various conceptualisations of business models that have been proposed, and (4) business models seeking to explain how value is created. Hence, there are many different ideas of what a business model is. What most researchers seem to put into the concept of a business model are the answers to: How to create value?, How to make customers pay for that value?, and How to convert payment through firm-internal operations into profit? (Teece, 2010; Morris et al., 2005; Chesbrough and Rosenbloom, 2002). Moreover, according to Chesbrough and Rosenbloom (2002: 549), the ultimate role of the business model for an innovation is to ensure that the technological core of the innovation delivers value to the customer. Business models have also been described as stories that explain how enterprises work and that answer the questions: Who is the customer? How do we make money? What underlying economic logic explains how we can deliver value to customers at an appropriate cost? (Magretta, 2002: 86).

Studies of business models have mainly taken a firm perspective with a typical focus on technology-based and/or entrepreneurial firms (see e.g. Ghosh, 1998; Gordjin & Akkermans, 2001; Morris et al., 2005). How the firm is assumed to relate to its environment differs among the conceptualisations. Most often the firm is considered in relation to 'the customers' or 'the market' in a 'classical marketing thinking' way (Håkansson et al., 2004). In contrast, Ghosh (1998: 126), who focuses on Internet business, takes a relational view by suggesting that: "…by allowing for direct, ubiquitous links to anyone anywhere, the Internet lets companies build interactive relationships with customers and suppliers, and deliver new products and services at very low cost."

Doganova and Eyquem-Renault (2009) explore what business models do and show that business models can be analysed as 'market devices'. A market device (with reference to Callon et al., 2007) is "a market-enabling instrument that operates empirically for the enhancement of socially situated practices of calculation and decision-making" (ibid.: 1561). Doganova and Eyquem-Renault (2009) also point at that investigating what business models do implies scrutinizing what they are made of, and they suggest that business models can be seen as 'boundary objects'. Chesbrough and Rosenbloom (2002), in turn, argue that a business model can be seen as a 'focusing device' that mediates between technology development and economic value creation: "The business model provides a coherent framework that takes technological characteristics and potentials as inputs, and converts them through customers and markets into economic outputs" (ibid.: 532).

Components of business models

Mahadevan (2000) argues that there is a lack of consistent definitions of business models in the Internet context. He suggests that a business model is a unique blend of three 'streams' (value, revenue and logistical) that are critical to the businesses of Internet based firms. The

value streams identify the value propositions to the buyers, sellers and other actors in an Internet context. The revenue streams are plans for how to generate revenues for the business, and the logistical streams relate to the design of the supply chain of the business. Furthermore, he describes "the process of arriving at an appropriate business model" involving choices among "the right mix of alternatives" (ibid.: 66) and points at three factors that affect the choice of business model: role in the market structure, the physical attributes of the goods traded and the personal involvement required in the buying/selling process.

Hedman and Kalling (2003) argue that the business model concept is often used independently from theory and that the model components and their interrelations become obscure as a result. The authors suggest a conceptual business model including customers and competitors, the offering, activities and organization, resources and factor market interactions. In addition, they argue that the causal interrelations and the longitudinal processes by which business models evolve should also be included in the conceptual model.

Zott and Amit (2010) conceptualise a firm's business model as a system of interdependent activities that transcends the focal firm and spans its boundaries. Taking a somewhat broader scope into consideration, Zott et al. (2011: 1020) suggest that "the business model is a new unit of analysis that is distinct from the product, the firm, industry, or network; it is centred on a focal firm, but its boundaries are wider than those of the firm…".

In contrast to the firm focused business model concepts Mason and Spring (2011) suggest a business model framework consisting of three main elements: the market offering, the technology and the network architecture. In their model the technology element contains four dimensions of technology: product, process, core and infrastructure technology. Firms in the network have different degrees of control over these technologies but since they are all influencing business models they should not be treated as 'environmental variables' but "as part of the network of internal and external actors that practice the business model" (ibid.: 1034). Moreover, Mason and Spring suggest four dimensions of network architecture: capabilities, transactions, markets and standards, and relationships. Capabilities include indirect ones based on the idea that a firm can access and utilise the capabilities of others within the wider business network. The ease with which firms can access their counterparts' capabilities is influenced by the existence and development of markets and standards. The structure, content and governance of transactions (suggested as a definition of business models by Amit and Zott (2001)) link this dimension of network architecture to relationships.

While Mason and Spring suggest that the three dimensions of their model are all interrelated, Chesbrough and Rosenbloom (2002) sort the components of business models into technical inputs and economic (market related) outputs. Furthermore, while some scholars (e.g. Teece 2010) see business model innovation as conceptually separate from technological innovation, others, like Mason and Spring (2011), consider technological innovation as part of the business model concept (Mason and Palo, 2012). Moreover, Mason and Palo (2012) describe business models as frames that work as configurations of multiple components or elements that are surrounded by narratives that explain how business works. Table 1 summarises some examples of business model concepts and the contexts for which the conceptualisations have been developed.

Table 1. Examples of conceptualisations of business models

Source	Description	Conceptual components	Context
Mahadevan (2000)	A business models is a unique blend of the three streams (see Conceptual components).	(1) Value stream (2) Revenue stream (3) Logistical stream	E-commerce/ Internet
Hedman and Kalling (2003)	A business model is based on the casual inter-relations among those components which are emergent over time.	(1) Customers (2) Competitors (3) Offering (4) Activities and organization (5) Resources (6) Supply of factor and production inputs (7) Longitudinal process	Information systems
Morris et al. (2005)	The business model captures the key aspects of a business plan but excludes operational issues, includes strategy elements but is not strategy. A business model is not an activity set, even though activity sets support the components of a business model.	(1) Factors related to offering (2) Market factors (3) Internal capability factors (4) Competitive strategy factors (5) Economic factors (6) Growth/exit factors	Entrepreneurial
Chesbrough and Rosenbloom (2002)	The functions of a business model are to: articulate the value proposition, identify a market segment, define the structure of the value chain, estimate the cost structure and profit potential of producing the offering, describe the position of the firm within the value network linking suppliers and customers, formulate the competitive strategy.	Technological inputs: e.g. feasibility, performance Economic outputs: e.g. value, price, profit	General/ innovation
Mason and Spring (2011)	A business model is understood as the frames for action.	(1) Technology (2) Network architecture (3) Market offering	General
Gordijn and Akkermans (2001)	The articulation of the economic value proposition.	(1) Business value viewpoint (2) Business process viewpoint (3) System architecture viewpoint	E-business information systems
Teece (2010)	The essence of a business model defines the manner how a firm delivers value to the customer, entices the customers to pay for that value and converts those payments to profit.	(1) Supplier Specification Value Proposition? (2) Related Appropriation Mechanism? (3) How can imitators be Held at Bay?	Business strategy and innovation

Theoretical underpinnings

While some of the authors make explicit accounts of their theoretical underpinnings others do not. Mahadevan (2000), for instance, expands his business model conceptualisation in the market/network dimension while the technological considerations are limited to 'the physical attributes of the goods traded'. Since his focus is on E-commerce, these attributes are mainly focused on if the goods can be transported electronically or if physical transport is needed.

Several authors argue for a need to develop theoretically sound business model conceptualisations (see e.g. Mahadevan, 2000; Amit & Zott, 2001; Porter, 2001; Hedman & Kalling, 2003; Morris et al., 2005; Zott et al., 2011). Amit and Zott (2001) present a model of the 'value creation potential' of e-businesses based on four interdependent dimensions, or sources of value creation: efficiency, complementarities, lock-in, and novelty. Moreover, they find that: "no single entrepreneur or strategic management theory can fully explain the value creation potential of e-business. Rather, an integration of the received theoretical perspectives on value creation is needed" (ibid.: 493). In particular, Amit and Zott (2001) argue that the value creation in e-business goes beyond the value concepts of the value chain (as conceptualised by Porter, 1985), the strategic networks among firms (Dyer and Singh, 1998) and the exploitation of firm-specific core competences (Barney, 1991). Therefore, their business model construct is suggested as "a unifying unit of analysis that captures the value creation arising from multiple sources" (Amit and Zott, 2001: 494), and is defined as follows: "A business model depicts the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities." (ibid.: 511).

Continuing on this route, Zott et al. (2011) argue that the research on business models have been developed in silos and that this hampers "a more unified study of business models" (ibid.: 1020). Hedman and Kalling (2003) argue along similar lines and suggest that there is a need to integrate theories that deal with industry structure, strategy, value chains and resources. The mixing of theories is considered by the authors to be a necessity in order to fully grasp the potential of information systems, since each and one of them only offers a limited scope of possibilities.

While these are examples of suggested 'mixed' theoretical approaches to the business model concept, Chesbrough and Rosenbloom (2002) take a clear starting point in the strategy literature and argue that their suggested business model concept may "inform these earlier perspectives" (ibid.: 532). The business model is offered as a construct that mediates the value creation process as it "translates between the technical and the economic domains, selecting and filtering technologies, and packaging them into particular configurations to be offered to a chosen target market" (ibid.: 550). Although the suggested approach is clearly firm centred, the cases presented exemplify how the companies' business models have emerged from interactive processes involving e.g. entrepreneurs, customers and sources of funding. The authors conclude by suggesting that "we need to learn more about the forces that facilitate and impede the search for constructive adaptation in the elements of an extant business model" (ibid.: 552). Mason and Spring (2011) in contrast, suggest that it is the interaction between technology (development), market offering (development) and network architecture (development) that shape what the business model becomes. Mason and Spring (2011: 1035) characterise the market offering as: "…consisting of the value-creation opportunity arising from alternative combinations of artefacts, access to suppliers' capabilities and capacities, and activities performed by the supplier(s) on the customer and/or its property."

Change of business models

When change of business models is concerned 'dynamic' views of business models have been suggested. Based on a study of Arsenal Football Club, Demil and Lecocq (2011) study business model evolution by looking at the interaction among the components of their "Penrosian" business model framework that includes resources and competencies, organizational structure and value propositions, and in which voluntary and emerging changes are identified. Another approach to 'dynamic business models' (Mason and Leek, 2008) relies on the resource based view of the firm and conceptualise dynamic business models as "the emergent outcomes of preconceived network structures built through the development of routines that guide problem solving" (ibid.: 774).

Chesbrough and Rosenbloom (2002) also address the dynamics of business models by arguing that business models unlock latent value from technology while the heuristic logic also constrains the subsequent search for new, alternative models for other technologies. The authors argue, by using Xerox as an example, that this implicit cognitive dimension has been overlooked in most discourses on the topic. A broader and more network related concern is that path-dependence restricts the development and implementation of new business models (Freytag and Clarke, 2012; Håkansson and Waluszewski, 2007). That is, not only the cognitive perceptions of the managers at 'the focal firm' are considered as barriers for change but also the activity, resource and actor networks in which the firms' current business models are embedded.

Freytag and Clarke (2012) point at two major limitations in traditional business model approaches. One is that organisational re-design is seen as a minor challenge in that e.g. path dependence is only to a limited degree taken into account. Second, they argue that the approaches are one-sided: "Firms are seldom independent, but are often embedded in a network in which changes have to take place not only in one firm, but in a number of firms" (ibid.: 5). Freytag and Clarke thus point at the importance of considering the embedded nature of business models and consequently that individual firms cannot change business models without considering the consequences for their business partners.

Palo and Tähtinen (2011) present a 'networked business model' useful in situations wherein it is impossible for a single company to govern all the relevant resources and activities needed in developing, producing and marketing technology based services. They note that the main challenge for managers is the 'business model dynamics': "The networked business model is not a static model of the net, but it needs to be constantly adjusted and developed according to the changes in the environment as well as the net" (ibid.: 385). With Palo and Tähtinen (2011) as an example, Coombes and Nicholson (2013) argue that networked and open business models are an emergent theme within the industrial marketing literature: "An open-business model examines the creation of value between stakeholders, rather than simply considering the value created within the boundaries of a single firm". From an IMP point of view, however, the latter would not be an option regardless of how business models are conceptualised owing to basic theoretical assumptions of resource heterogeneity and interdependence. Considering network embeddedness among firms' activities and resources, the notion of change of business models become a key network issue since for one firm to change its offering other firms have to adjust. Consequently, how business relationships, and the conditions for interaction, interdependencies and adjustments are affected become vital issues when making such changes.

Discussion: Focus and scope of business model conceptualisations

The discussion of business model conceptualisations focuses on three key issues: First, the issue of what theoretical assumptions to build on when developing theoretical frameworks for exploration of business models. Second, the issue of what starting point to take for analysis of business models. Third, the issue of relying on static-descriptive versus dynamic considerations for business model conceptualisations.

When theoretical underpinnings are concerned there are examples of very different approaches, some of which are grounded in established theories while others are more implicit or 'hidden'. In contrast to Zott et al. (2011), who suggest that there is a need of a unified approach (involving different theoretical foundations) to business models, it can be argued that any definition or approach to business models needs to be related to specific underlying theoretical assumptions of business life. Most conceptualisations clearly rely on some version of the notion of 'the independent firm acting on the market' assumption, either relating to strategy or to the resource based view of the firm. If aiming at developing the business model concept for an industrial network setting, the firms or business units, cannot be seen as independent and thus their businesses cannot be assumed to relate to individual firms in view of faceless markets but have to be considered in their network context wherein several actors are involved in making, selling, buying and using interrelated products or technologies. Hence, while for instance Magretta (2002) focuses on the firm and the supply side of business models, following from a suggested focus on *making* and *selling*, we also suggest inclusion of the buying side by adding *buying* and *using*. Håkansson and Waluszewski (2002) refer to a traditional view of economic exchange wherein products are treated as 'given'. In contrast, from an interactive or network perspective the features of a product are the result of the interaction between the buyer and seller, and the 'imprints' of such interaction "reflect the fact that the product is part of both a 'selling' and a 'using' system – or sets of products" (ibid.: 35).

Most business model conceptualisations take *the firm* as a starting point. Freytag and Clarke (2012) refer to these as 'managerial design approaches'. The focus on *the firm* as the key unit of analysis is problematic for two reasons. First, because a firm may be engaged in several business models (Hedman and Kalling, 2003) and that the relation between different business models is a vital issue for every firm. Second, and more importantly, it disregards the interactive and relational aspects of business exchange. Spring and Araujo (2009: 458) contrast the operations management approach with the business model (BM) approach: "Rather than putting the firm and its operations centre-stage, adding suppliers and the supply chain as subsidiary issues, then trying to insert new products and services into this network, the BM approach starts with the essence of some potentially valuable offering and then configures a network to deliver it." Hence, the 'offering' can be suggested as a more suitable starting point for analysis of business models than firms. This relates to the suggested consideration of 'boundary objects' since 'offerings' can be seen as both the object and subject of producer-user interaction, rather than being limited to the features of a particular product or service (Araujo and Spring, 2006), or to a specific sequence in the development (first) of technology and (then of) 'markets' (see e.g. Chesbrough and Rosenbloom, 2002; Teece, 2010). This contrasts the notion of business models as 'focusing devices' that mediate between technology and economic value creation (Chesbrough and Rosenbloom, 2002), which points at an inside (technology) – out (market) logic. Coombes and Nicholson (2013) refer to such business model conceptions as being 'closed' and directed to passive receivers, as opposed to 'open business models' that instead rely on active business partners. Hence,

considering the embeddedness of an offering in a wider business network permits a focus on its interaction with various technical resources and thus on the relationships through which this interaction takes place.

Placing offerings at the centre stage in the analysis of business models draws the attention to their embeddedness in wider technological and organisational contexts. Based on their resources, activities and business exchange partners, firms see opportunities differently. Involving multiple and varied actors therefore may reveal 'unimagined possibilities' to develop current business models (Mason and Palo, 2012). Considering change of business models in such a network perspective becomes very different from simply considering business models in terms of the 'revenue streams' generated or 'how to make customers pay'. Any kind of change of an offering entails change also in the technology and network dimensions, which makes change or development of business models a salient issue not only for the company producing and selling the offering but for buyers and users, for suppliers of complementary offerings etc.

That is, we suggest that in an industrial network approach to business models, both buyers and suppliers need to be involved in the shaping and performance of business models and that the technical and organisational embeddedness of offerings needs to be addressed in the analysis of changing business models. Furthermore, we assume that every business exchange, wherein the offering is the object and subject of exchange, can be translated or interpreted in terms of a business model. We thus consider the business model concept to be generic, i.e. that it can be used to describe the business logic and content of any business exchange. Moreover, we assume that this involves interaction with network partners and technologies that may not be directly related to the specific business exchange between a focal buyer and supplier of a specific offering.

As suggested by Freytag and Clarke (2012) we also assume that network embeddedness has implications for change and thus that individual firms cannot change their business models independently. Interdependencies across firm boundaries entail that changes need to be made in interaction and that various adjustments by several firms may be required. In the next section we discuss the principle ways in which business models can change in industrial networks based on these theoretical notions.

BUSINESS MODELS AND CHANGE DIMENSIONS

In this section we identify and exemplify three broad principal change categories with regard to the ways in which offerings change, and the business models that emerge from such changes. Offerings are considered as the content of buyer-supplier relationships and as embedded wider business networks of connected relationships.

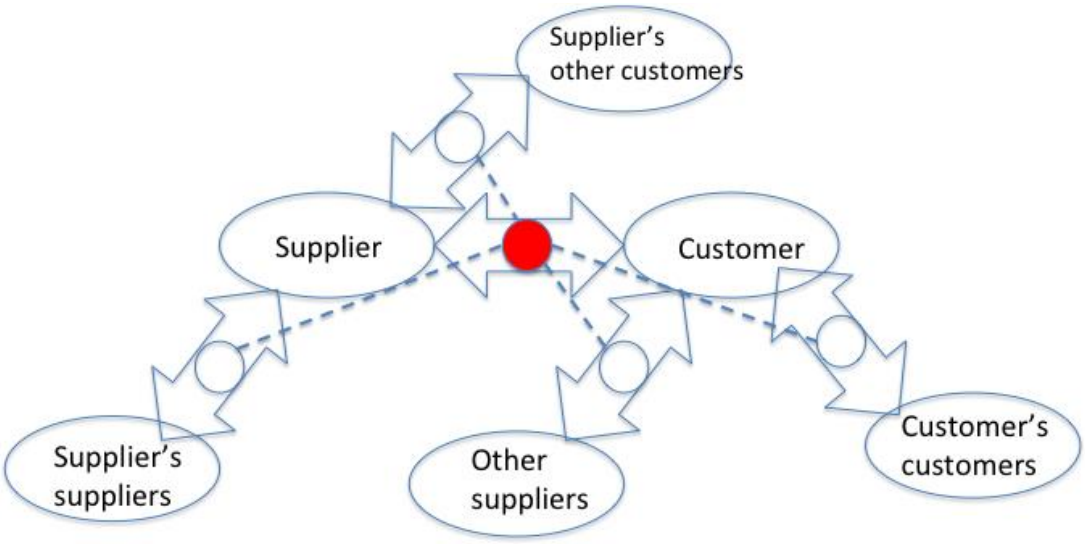

Figure 1. A focal offering embedded in an industrial network.

In Figure 1 we illustrate the embeddedness of offerings pointing to the ways in which they relate to business relationships. As such they are also connecting, as output of and input to, the activities and resources of the firms involved in them. Based on these basic notions we identify three principal ways in which market offerings, and the associated business models, may change: one concerned with changes in the division of labour between the selling and buying firms, one concerned with changes in the ownership of the resources that are activated, and one concerned with changing combinations of market offerings. Below we discuss, by use of recent examples and references, the three broad change categories.

Change in the division of labour

One category of changes concerns changes in the activity dimension and thus of the division of labour among firms. In a chain of activities involving several firms the business exchange may take place in different 'locations' of that chain, and those 'locations' and consequently the content of the exchange at each such 'location' may change over time (see Figure 2). There are several recent examples of such changes in the division of labour among firms in supply networks. For instance, Spring and Araujo (2009) describe how paint suppliers to automotive OEMs, instead of selling paint and being paid per litre supplied, are now often engaged to run the OEMs paint line and be paid per vehicle painted. Another set of examples are discussed by Kujala et al. (2010) describing how suppliers of power plants take on the actual operations of the systems. They refer to such approaches as 'servitized business models'. Both examples, hence, describe changes where suppliers take on activities that were previously either performed by the customer or by other suppliers to that customer.

'Mundane transaction costs' have been suggested as a concept to describe the costs involved in determining where in a 'total system of activities' those activities may be specified to an extent sufficient to allow economic exchange to take place (Spring and Araujo, 2009). The reasons for making changes in the division of labour may be related to changing conditions for efficient performance of 'those activities', e.g. due to changing production resources and changing prerequisites for capturing economies of scale and scope in the performance of production, or other, activities involved in a system of activities. Another reason for such changes may be due to changing conditions for activity coordination and integration of the activities in the chain across the boundaries of the firms involved.

Gadde et al. (2010) discuss configurations of activities as "the total activity configuration required to land a certain product in the hands of the end-user" and relate to the interdependencies that activities are subjected to; serial, dyadic and joint (ibid.: 90-91). Furthermore, they argue that there are two main drivers of performance enhancements in activity configurations, one concerning the efficiency in single activities and the other concerning the coordination of the activities involved in a configuration. Owing to the three forms of interdependence changes that are made in order to gain efficiency improvements in one dimension, e.g. to capture economies of scale, may result in drawbacks in the other change dimension, i.e. coordination. The conflict between taking advantage of similarities among activities (benefitting economies of scale) and taking advantage of heterogeneity through making customer specific adjustments, is highlighted. The conditions for this balancing change over time, which also changes the conditions for the division of labour among the firms involved.

Change in resource ownership

While changes in the division of labour implies 'a move' of activities and the resources that they activate, changes in resource ownership implies changes in the division between the activities and the resources activated (see Figure 2). Spring and Araujo (2009) point at ownership and the 'rental/access paradigm' (Lovelock and Gummesson, 2004) having explanatory power in cases such as Rolls-Royce who owns aeroplane engines and has changed the business model from offering engines to selling their "power by the hour" (Gebauer et al., 2013). This concerns a change in ownership of what was previously the product/offering, and that turns into a production resource activated by the buyer/user, and thus also of the payment principles involved in the business model. Another example is car-sharing schemes that involve various forms of collective rather than individual ownership of vehicles, and payment according to usage (Mont 2004 in Spring and Araujo 2009).

Lovelock and Gummesson (2004) argue that: "market exchanges that do not result in a transfer of ownership from seller to buyer are fundamentally different from those that do" as a critique of certain ideas prevailing in service marketing. By pointing at how the user of a resource can get access to it, or its services, for a longer or shorter time period without buying it, they also point at services as a possible means of resource sharing following from that the owner selling access to the resource might sell the access to more than one customer.

Generally, changes in ownership have been highlighted in recent literature by authors suggesting that there is a trend going from the exchange of (physical) products into an increasing focus on offering 'services' (Wise and Baumgartner, 1999; Gebauer et al. 2005; Cova and Salle, 2008; Gebauer et al., 2012). Wise and Baumgartner (1999: 133) argue that providing service is more lucrative than making products and that new business models capture profits at "the customer's end of the value chain". The rational for this move is argued to be that: "The combination of stagnant product demand and an expanding installed base has pushed economic value downstream, away from manufacturing and towards providing services required to operate and maintain products" (ibid.: 134). Moreover, according to Ehret and Wirtz (2010: 136) 'business service providers' can relieve their customers from the costs of asset ownership, unlock management capacity and support their customers in navigating their boundaries towards their most valuable business opportunities.

However, the 'transition to service' by manufacturing firms has been debated (see e.g. Spring and Araujo, 2013). Also, whether this category of changes is new (as 'a trend') or not has been questioned (Spring and Araujo, 2009). As a category of changes in business models it is

interesting regardless of whether it is new or not. Examples of this move include various combinations of changes in technology and of the organisations involved. They involve changes in offerings, going from offering the resources themselves to offering the use of them, which also entails heavier balance sheets for the sellers and a greater emphasis on variable costs for the buyers. Hereby, the incentives for production and use may also change e.g. for the seller to become more concerned with efficient resource use in the design of the resource and for the buyer to take better advantage of buying access to the resource. Hence, as a result of such changes: "Cost structures change, incentives are aligned differently, risks are re-distributed" (Spring and Araujo, 2009: 446).

Interestingly the 'service literature' does not seem to put as much emphasis on ownership as on 'non-ownership' (see e.g. Ehret and Wirtz, 2010). From an industrial network point of view a key aspect of this category of changes is how the change of the offering entails new interfaces between the 'producer' and the 'user' sides of the activated resource. For instance, some 'services' such as maintenance become integrated on the 'resource ownership side' and thus become removed from the offering to the customer/user.

Change in the combining of offerings

New ways of combining previously separate offerings into integrated ones is a third category of changes. The assumption that all resources are always combined with other resources highlights both the business opportunities and the difficulties in re-combining them (Gadde et al., 2010). The change from purchasing of components into procurement of systems or modules has been a research theme for some time (see e.g. Lilliecreutz, 1996; Jellbo, 1998). These studies focus on how physical products (components) are bundled into wider technical systems and offered to customers, e.g. in the automotive industry, who try to specialise their operations and to reduce their supplier bases. Kaufman et al. (1996: 723) for instance, point at new opportunities for suppliers to large OEMs arising from "increasing the volume and breadth of product". This approach also links to outsourcing and Kaufman et al. point at the necessity for suppliers to adapt: "Survival in a strategic outsourcing environment requires suppliers to hone competency skills and organizational forms that allow for adaptation and quick customer demand response through inter-organisational linkage, networks, partnerships or strategic alliances" (ibid.: 723).

More recently there has been a growing focus on so called 'solution' offerings (see e.g. Galbraith, 2002; Davies, 2003; Tuli et al., 2007; Storbacka, 2011; Paiola et al., 2013). Tuli et al. (2007) include three aspects in their definition of a solution: it involves a combination of goods and services, the elements are designed, modified or selected to address a particular customer's requirements and each element of a solution need to "work with" the other elements of a solution. Storbacka et al. (2013) argue that 'solution business models' relate to two different business logics of particular importance in an industrial context: 'installed-base' and 'input-to-process'. 'Installed base' refers to companies that provide goods and related services, creating an installed base at the customers, while 'input-to-process' refers to firms that provide goods that are used as input in their customers' processes. Spring and Araujo (2009) refer to 'bundling' as combinations of products and services: "From the provider's perspective, bundling simplifies the range of offerings and can give economies of scale in operations; from the buyer's perspective, bundling simplifies choice, but may result in paying for elements that are not required" (ibid.: 455).

Several authors address relational consequences of moving towards 'solution offerings' or 'integrated solutions' (Windahl and Lakemond, 2006; Tuli et al., 2007; Gebauer et al. 2013).

Gebauer et al. (2013) point at manufacturers of capital goods that cannot take on all the relevant service activities required for them to offer 'solutions', and who as a consequence "extend the traditional, vertically-integrated, supplier-customer relationship with service networks thus enabling them to provide services that play a key role in the offer of solutions." They also add to the example of Rolls-Royce's business model that services of the jet engines are provided through a complex service network comprising specialised parts suppliers and maintenance specialists. According to Tuli et al. (2007: 14): "selling solutions is a complex exercise that involves the consideration of conflicting requirements of multiple stakeholders in a customer organisation". Paiola et al. (2013: 390), in turn, point at "the move being made by manufacturers of capital goods from offering products to solutions implies that they must make a decision as to whether the capabilities necessary for providing solutions should be developed internally or externally". Windahl and Lakemond (2006) identify internal factors and external relationships in the network as important for selling so called 'integrated solutions'. While Davies (2003) and Galbraith (2002) emphasise internal factors, Windahl and Lakemond (2006) also consider external factors such as the strength of relationships between different actors involved, the firm's position in the network, the firm's network horizon, the solution's impact on customers' core processes, and external determinants. Windahl and Lakemond conclude that it is crucial to manage both the internal and the external aspects simultaneously.

Summary of the identified change categories

Figure 2 summarises the identified change categories with a focus on changes in the division of the activities and resources in a focal dyad.

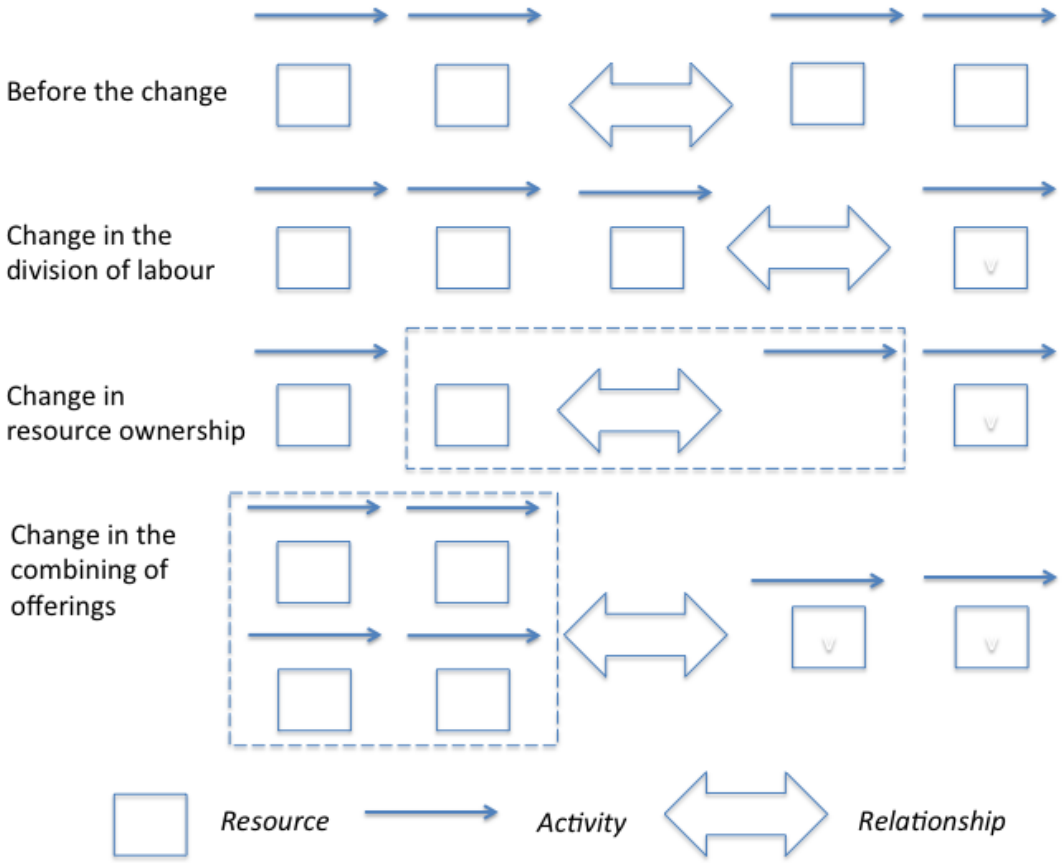

Figure 2. Summary of the change categories in terms of changes in the distribution and combination of for the activities, resources and relationships involved in the focal dyad.

Rationales for changing offerings and consequences for emerging business models

The rationales for making the changes in the three different ways described above can be related to three key issues: How can activities be better coordinated?, How can resources be better utilised?, and; How can the conditions for problem solving be improved? These issues can, in turn, be linked to the three types of economies suggested by Gadde et al. (2010): economies of integration, economies of scale and scope, and economies of innovation. Such economies emerge from collaboration within a buyer-supplier dyad but also depend on the focal parties relationships with other parties (Gadde et al., 2010; Najafi, 2013). While the first two change categories have apparent links to changing conditions for economies of scale and scope and for economies of integration, the last one have potentially strong links with economies of innovation. However, all change categories suggest changing conditions for further development of offerings as well as of the resources activated.

When consequences of changing offerings, and thus of emerging business models, are concerned these need to be analysed in terms of changing conditions for: (1) producing and selling, (2) buying and using, and (3) the interdependence to other, related, 'offerings' and relationships to the parties who are involved in them. Hence, capturing the organising and technical aspects in the network in which the offering is embedded is vital to understand the changing scope of the business model.

The analysis can be sorted into three layers. The first layer relates to the focal relationships between the firms directly involved in the offering. The second layer concerns the focal dyad in relation to other business relationships that become influenced as a result from changing the focal offering. The third layer involves additional relationships they may become (indirectly) affected through the connections between the focal offering and other offerings.

CONCLUDING DISCUSSION: CHANGE OF SCOPE AND SCOPE OF CHANGE

The conceptualisations of business models that have been suggested in recent literature display a variety of purposes, theoretical assumptions, and components. In this paper we have scrutinised some of the most frequently cited ones in view of their basic assumptions and usefulness when analysis of change of business models are concerned. We conclude that current conceptualisations are problematic in several regards. First, they typically encompass a more or less broad variety of interrelated components or elements that together should contribute to describe the business model(s) of a firm at a particular moment in time. Because of their firm centred character, and the subsequent inside-out perspective of most conceptualisations they are, however, difficult to build on from a research as well as a managerial point of view. Second, many conceptualisations are explicitly or implicitly building on a mix of theoretical notions which entails problems when these rest on different basic theoretical assumptions. In particular, we argue that this is problematic when some assumptions are based on the firm as an independent unit while other rest on the firm (and its activities and resources) as being interdependent with other companies. Third, most conceptualisations are static and descriptive in the sense that they describe 'the firm's business' and how this relates to the components on which the conceptualisations are built at a certain point in time. Owing to the 'simplified complexity' entailed by (1) involving numerous interrelated firm internal components in the conceptualisations, and (2) disregarding firm external aspects, change of business models become diffuse with regard to the scope of the consequences of such changes.

The framework that we suggest relies on that firms and their activities and resources are interdependent with its counterparts. The focus is therefore not set on the firm per se but on

the offering as the object and subject of business exchange as these are the outcomes of the ways in which the activities and resources are organised among the firms involved in the production, selling, buying and using of the offerings. The offering hence captures the content of the exchange within a (focal) dyad involving a buyer and a supplier and permits extension to relevant third parties through connected offerings in related dyads. Analysis of the 'change boundary' (Holmen, 2001) thus becomes important when analysing the consequences of a change of an offering and how that change affects the business model with all its ramifications in the network. Based on this generic framework we suggest that business models can change in three principal and sometimes interrelated ways; (1) by changing the division of labour among the firms, (2) by changing resource ownership, and (3) by combining offerings (or the components of offerings) in new ways.

The three suggested change categories all have potential impact on the network structure in which the firms are involved. Regardless of if a particular firm reduces or expands its scope of activities as a result from changing its offering this will have consequences for the relationships with its counterparts. Increasing interdependence through adjustments of activities and resources made in interaction between two parties has potential effects on other business relationships and on how the focal relationship needs to be managed. Changing technological interfaces between the firms involved in wider technological systems changes the conditions for further problem solving and innovation. All in all these impacts can be translated into descriptions of emerging business models although these may not be apparent for, or intended by, the firms involved in developing the offerings in the first place. That is, considering the full implications of network and technology embedded offerings imply that business models change in ways that may extend the scope of awareness of the firms involved in developing their offerings.

Although the above point to a 'dark' side of network effects, there are surely reasons to continuously contemplate how to develop offerings. In terms of managerial implications, the issue of 'changing the business model of the firm' needs to be rephrased into a set of issues that concerns not just the focal firms but also interaction with their other business partners. First, can the offering be developed so that the firms' can utilise resources more efficiently? Second, can the activity coordination be improved if the activities become reorganised among the firms involved? Third, can the scope of the market offering be developed so that the conditions for problem solving become improved?

The offering concept may be misleading since it implies the producing and/or selling company's perspective. However, changing purchasing strategies may be as important as changing marketing strategies when initiatives to and developments of business models are concerned. Apparently, these matters are as much a concern for purchasing as they are for marketing. The three strategic purchasing issues suggested by Gadde and Håkansson (2001): the boundaries of the company's own activities, the nature of relationships with individual suppliers, and the total supply base and the connections among the suppliers, are all affected by changing offerings and of the emerging business models that follow from such changes. Few, if any, authors have made explicit links between development of business models and development of purchasing strategies.

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