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Framing agenda for business model innovation research from the B2B context

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Samfunns- og næringslivsforskning AS
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Abstract

This paper reviews extant business model literature in business-to-business (B2B) context and frame research agenda that can be explored by future studies using various organizational theories. We have outlined four research themes and seven research topics for business model research within the B2B context. Further work on these topics can make significant contribution to the business model literature.

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1. Introduction

In recent years, business model has been the focus of substantial attention by both academics and practitioners (Zott *et al*., 2011). The success of modern firms (or their business models) could perhaps depend on how they design business model and keep track of their relationships with the exchange partners. Where, keep track of relationship represents both initiation and the maintenance of such relationships. For that reason, managers need to accommodate some relevant aspects of business-to-business (B2B) context in their business models. In the B2B context the relationship between or among firms becomes a critical issue as it influences the business they perform presently or intend to perform throughout the years in the future. Moreover, B2B relationships lead to increasing interactions between different actors, which potentially provide complementary response to insecurity arising from development and use of technologies. Many of the business model literature have not explicitly focused on B2B context, however some of them (e.g., Amit and Zott, 2000, 2001, 2010, 2012; Mahadevan, 2000; Osterwalder, 2004; Shafer *et al.*, 2005; Tikkanen *et al*., 2005; Voelpel *et al*., 2005; Chesbrough, 2007; Teece, 2010) have been found pretty well focused on B2B context. In their comprehensive review of the academic literature Zott *et al*. (2011) reveal: (1) scholars do not agree on what a business model is, (2) the literature is developing largely in silos (i.e., favoring the phenomena of interest to the respective researchers), (3) despite conceptual differences among researchers, there are some emerging themes. These themes include: recognition of business model as a unit of analysis and as a system level approach to explain how firms do business, the activities of a focal firm and its partners play an important role in the various conceptualizations of business models, and value creation and value capture are key areas of business models. Considering such scenario of the literature, the main objective of this paper is to understand the B2B themes that are addressed in the literature and frame interesting research topics within business model innovation (BMI) in the B2B context.

We outline four research themes and seven research topics for business model research within the B2B context. These topics can be explored by future studies using various organizational theories. Thus, we hope further research can make significant contribution to the BMI literature. In the following, we review the business model literature primarily in the B2B context.

2. B2B context in the business model literature

Our review of the literature shows that business models in the B2B context have emerged as an important means to commercialize innovations (Chesbrough and Rosenbloom, 2002; Chesbrough, 2010; Teece, 2010). Scholars have acknowledged the fact that the business models have become important drivers of innovation. Chesbrough (2010) says, even if we have a well-established and currently successful business model, it may not always respond to the environmental dynamics.

The business model literature point out that research on business model innovation spreads out across various fields including innovation management, strategic management, and entrepreneurship area indicating a need to gain a deeper and more reliable understanding of how business model innovation impacts on firm results in terms of financial performance (Schneider and Spieth, 2013). This diversity of research focus itself justifies how important is the role of business model innovation for the success of the organizations. Nonaka and Takeuchi (1995), for example, state that the success of Japanese companies is possible just because of their capability as a whole to create new knowledge, disseminate it through the organization and embody it in products, services and systems.

Despite the crucial and integrating role of business model in the past, the business model as a concept has become prevalent with the advent of internet in the mid-1990s (Zott *et al*., 2011). The evolution of value creation, from value creation by the manufacturing firm to value co-creation in a network has become more interesting to study. Because such understandings not only address the changing market needs, but also provide logical standpoints upon which emerging business models can find their roots. Thus, in order to proceed towards framing research topics for BMI research in B2B context, a comprehensive literature review of the selected extant studies providing conceptualizations of business model in consideration with B2B context is undertaken. Table 1 summarizes the main findings and implications of the literature.

Table 1. Overview of selected business model studies in the B2B context

Author(s), (year)	Business model theme(s)	Findings & Implication(s)
Mahadevan (2000)	Design value stream, revenue stream and logistic stream considering partners and buyers network	BM identifies the value proposition for the exchange parties, outline revenue generation plan, and address various issues to design a supply chain (e-business context)
Amit and Zott (2001)	The content, structure, and governance of transactions; Value creation design	BM depicts the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities
Zott and Amit (2007)	Efficiency and Novelty	BM elucidates how an organization is linked to external stakeholders, and how it engages in economic exchanges with them to create value for all exchange partners
Zott and Amit (2008)	A structure, content and governance of transactions	Business model represents a conceptualization of the pattern of transactional links between the firm and its partners
Zott and Amit (2009)	Role of business models in creating value through networks	Business models have greater potential to value creation in B2B context
Zott and Amit (2010)	Transaction connect activities	BM is a system of interdependent activities, it transcends the focal firm and spans its boundaries
Chesbrough and Rosenbloom (2002)	Value proposition; Market segment; Structure of value chain; Cost structure and profit potential; Position within value network; Competitive strategy	BM connects technical potential with the realization of economic value (i.e., it mediates the value creation process)
Magretta (2002)	A system that shows how the pieces of a business fit together (customer definition; value to customer; revenue logic; and economic logic)	BM focuses on how enterprises work: Better understand customer and their values, money making mechanism and underlying logic that explains how we can deliver value to customers at an appropriate cost
Osterwalder (2004)	Value proposition; Customer segments; Partners' network; Delivery channel; Revenue stream	BM represents three clearly differentiated layers for strategy and its implementation

Author(s), (year)	Business model theme(s)	Findings & Implication(s)
Osterwalder *et al*. (2005)	Value proposition; Target customer; Distribution channel; Relationship; Value configuration; Core competency; Partner network; Cost structure; Revenue model	BM contains a description of the value a firm 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
Morris *et al.* (2005)	Venture strategy, architecture, and economics	BM can create sustainable competitive advantage in defined markets through Value proposition, customer, internal competencies, external positioning, economic model, and personal/investor factors
Shafer *et al.* (2005)	Strategic choices, creating value, capturing value, and the value network	BM represents a firm's underlying core logic and strategic choices for creating and capturing value within a value network
Tikkanen *et al.* (2005)	Material aspects: strategy & structure, network, operations, finance & accounting Belief system: reputational rankings, industry recipe, boundary beliefs, product ontologies	BM represents related material and cognitive aspects, Key components include the company's network of relationships, operations, and the finance and accounting concepts of the company
Voelpel *et al*. (2005)	Customer value propositions; Value network configuration; Sustainable returns for stakeholders	BM reflects the business's core value proposition(s) for customers, its configurated value network and its continued sustainability
Chesbrough (2006)	A business model denotes the way of making money out of a technology	No matter how the technology is innovative and sophisticated, it will fail, if it is not possible for market players to make profits from it
Chesbrough (2007)	Value proposition; Target market; Value chain; Revenue mechanism; Value network or ecosystem; Competitive strategy	BM first defines a series of activities making possible to yield a new product or service and then captures value from a portion of those activities
Giesen *et al.* (2007)	Three main types of business model innovation: innovations in industry models, in revenue models and in enterprise models	Innovations in enterprise models focus on network plays (i.e. external collaboration and partnerships). Companies using network plays realized similar financial results as companies that used other strategies

Author(s), (year)	Business model theme(s)	Findings & Implication(s)
Johnson *et al.* (2008)	Customer value proposition, profit formula, key resources, and key processes	BM consists of four interlocking elements that taken together create and deliver value
Vargo *et al.* (2008)	The value of a product for the manufacturer may be different from the value that the customer expects to get out of the product	Value is always uniquely and phenomenologically determined by the beneficiary or stakeholder
Bouchikhi and Kimberly (2003)	Firms' Assets and processes, cognitive ability of managers	Firms face barriers to innovate BM
Doz and Kosonen (2008)	Meta capabilities: strategic sensitivity, leadership unity, resource flexibility	Firms move towards being more agile
Lüdeko-Freud (2010)	Social and environmental sustainability	BM as key to delivering sustainability
Bourdreau and Lakhani (2009)	External innovator, collaborative community/market	Innovator firms organize as community
Gambardella and McGahan (2010)	Open innovation	Open business model emerges as a consequences of the reconfiguration in downstream activities and capabilities
Teece (2010)	Articulating value proposition for the customer, and a viable structure of revenues and costs	Revenue and costs logic compliments technology, customer value proposition and value capture mechanism
Casadesus-Masanell and Ricart (2010)	Overlaps between strategy and a business model	Strategy and business model may coincide to a certain degree, however the differences between them are more obvious
Abdelkafi *et al*. (2013)	Communicating, creating, delivering, and capturing value out of a value proposition	BM is a framework positioning value proposition at the center, whereas value communication, creation, delivery and capture are placed around

Given such scenario of the research focus, it is important to understand what special issues from B2B context are currently captured, and what interesting issues still remain uncovered in the extant business model literature. The review of literature as depicted in Table 1 reveals, despite conceptual differences to see the business model in B2B context, researchers have been focusing mainly on *four B2B themes*. These themes include: (1) value networks as a system level and holistic approach to explain how firms do business; (2) the governance mechanisms for transactions/activities of a focal firm and its partners; (3) organizing firms' resources or specific investment; (4) and concerns assisting firms' long-term exchange possibilities (i.e. sustainable exchanges). It can be noted that, these B2B themes more or less play an important role in the various conceptualizations of business models, where value creation and value capture have become the central focus of the literature. Table 2 and Figure 1 demonstrate the B2B themes as captured in the extant literature.

Table 2. B2B focused business model literature

B2B themes	Contributors	Uncovered issues
Value networks	Mahadevan (2000); Amit and Zott (2001, 2012); Chesbrough and Rosenbloom (2002); Magretta (2002); Osterwalder (2004); Osterwalder *et al.* (2005); Chesbrough (2007); Giesen *et al.* (2007); Vargo *et al.* (2008); Zott and Amit (2007, 2008, 2009, 2010); Abdelkafi *et al*. (2013)	Marketing strategy decisions Building blocks of business models
Governance of transactions (or innovations)	Chesbrough (2007, 2010); Bourdreau and Lakhani 2009; Gambardella and McGahan (2010)	Antecedents of business model elements and their impact
Organizing resources/Firms' specific investment	Bouchikhi and Kimberly (2003); Chesbrough (2010); Doz and Kosonen (2008)	How can resource/capability impact the way companies think about B2B relations?
Sustainable exchanges	Morris *et al.* (2005); Voelpel *et al*. (2005); Lüdeko-Freud (2010); Abdelkafi *et al*. (2013)	How can the term sustainability be defined and applied to business model innovation?

The theme 'value networks' appears to be reflected by the almost literature, thus it can in a way wholly represent the B2B context. Similarly other themes 'governance of transactions', 'organizing resources', and 'sustainable exchanges' were respectively found to reflect the themes in lesser degree. For this reason Figure 1 depicts the theme 'value networks' accommodates rest of the three themes, similarly the theme 'governance of transaction' accommodates rest of the two, and the theme 'organizing resources' accommodates the remainder theme. Table 2 also depicts the interesting but uncovered issues in the extant literature. These issues may have potential implication for firms' performance, and we later develop these issues into research topics.

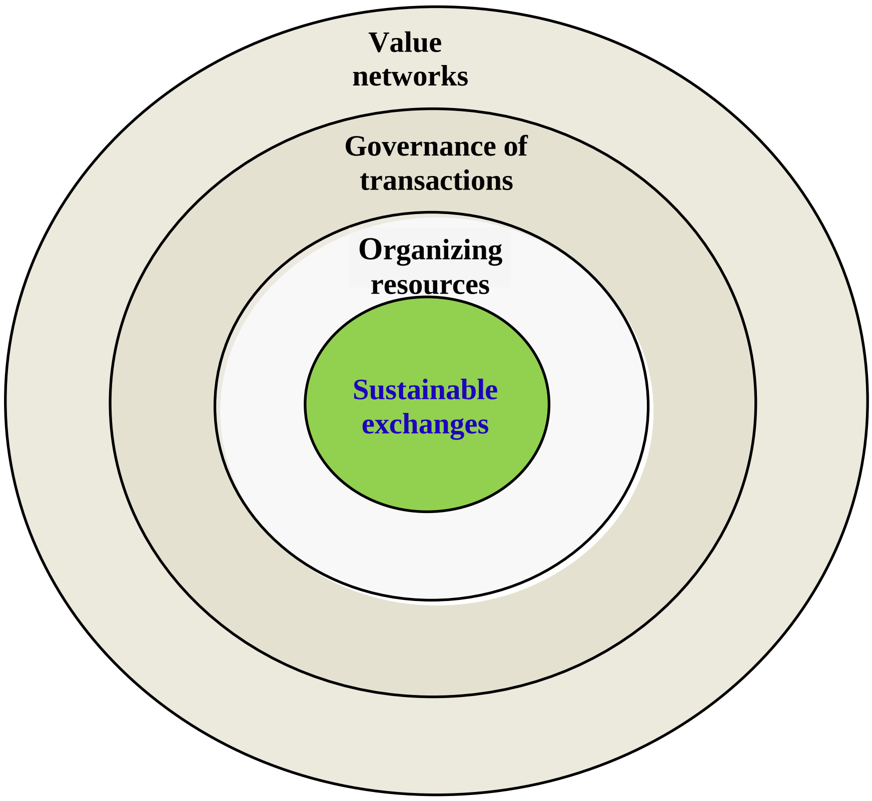

Figure 1. Distribution of B2B themes in the B2B focused business model literature

2.1 Value networks

A value network consists of technologies, actors and infrastructures. In such a network, a firm undergoes through several new interactions with these agents, which are likely to improve its performance. Having a deep look on value networks, managers can understand how firms do business (Mahadevan, 2000; Amit and Zott, 2001; Chesbrough and Rosenbloom, 2002; Magretta, 2002; Osterwalder, 2004; Chesbrough, 2007; Giesen *et al.*, 2007; Vargo *et al.*, 2008; Zott and Amit, 2007, 2008, 2009, 2010; Abdelkafi *et al*., 2013), and thus they gain important insights worthy in innovating business models. Amit and Zott (2001) argue that a firm's business model is an important locus of innovation and a crucial source of value creation for the firm, and its supplier, partners and customers. In their review of theories including virtual markets, Schumpeterian innovation, value chain analysis, the resource-based view of the firm, dynamic capabilities, transaction cost economics and strategic networks, they note that each of these theories contributes elements to the concept of business model, but none of them can fully explain business models. Based on a sample of 150 firms using e-business models they state that business model is an activity system perspective, which represents the design elements and design themes. Design elements consist of content, structure, and governance of transaction designed to create value through exploiting business opportunities. Content refers to information of goods that are being exchanged, and resource and capabilities required for doing exchanges. Structure refers to network size, ways in which parties are linked and exchanges are executed, order and timing of resources, market mechanism, and flexibility and adaptability of transaction structure. Governance refers to the locus of control of information flows, goods and finances, nature of control mechanism (i.e., trust, incentives). Whereas design themes represent four potential sources of value creation:

(1) novelty, (2) lock-in, (3) complementarities, and (4) efficiency. These value drivers can be mutually reinforcing. This means, the presence of each value driver can enhance the effectiveness of any other value driver. Morris *et al.* (2005) support this idea stating that the novelty presented by new, effective models can result in superior value creation. Magreta (2002) also support this way of pursuing business model as she adds business models not only ensure superior value creation but also replace the old way of doing things to become the standard for the next generation of entrepreneurs.

Modern firms focus more on capturing value through their task and activities. Zott and Amit (2009) have stated that business models have greater potential to value creation in B2B context. For example, the internet access has offered firms with the potential to experiment with novel forms of value creation, which are interconnected in the sense that value is created by a firm getting some sorts of help support and cooperation from its exchange partners. Thus, value creation mechanisms are directly related with the firms' existing networks and strategies - that are mostly dependent upon firms' choice. Some firms can choose Schumpeterian innovation as strategy; others can choose either Porter's value chain configuration or strategic networks among firms (such network exploits firms' specific core competencies).

Some scholars argue that value can also be created through revolutionary business models. For instance, Hamel (2000) states that in order to thrive in the age of revolution, firms must develop new business models, in which both value creation and value capture take place in a value network consisting of suppliers, partners, distribution channels, and coalition that extend the firm's resources. Business models are also considered to have a central role in explaining firm performance. For instance, Afuah and Tucci (2001) propose a business model by unifying competitive advantage construct and firm performance construct and later defined business model as being the method that is built using firm's resources so as to offer better value and to make money. Zott and Amit (2007) have also analyzed the performance implications of business model design in entrepreneurial firms. They refer to business model as the design of a focal firm's set of boundary-spanning transactions with external parties, and argue that the essence of the association between business model design and focal firm performance can be analyzed by looking at two distinct effects: the value creation potential business model design and the focal firm's ability to appropriate that value. Thus, they come up with two design themes namely: efficiency and novelty around which they envision the business model. In this empirical study (i.e. Zott and Amit, 2007) business model was used as the independent variable, which was linked to firm performance through the moderating effect of environment variable.

Similarly, another empirical study by Patzelt *et al.* (2008) also analyzes business models that biotechnology firms might adopt: platform and therapeutics. This study shows that founder-based, firm specific experience of management team members can have either a positive or a negative effect on the firm's performance, depending on the business model adopted. In the same vein, Zott and Amit (2008) studied the way firm's business model and product market strategy interact to impact the firm performance. Their contingency theory based study findings show that (1) business models that emphasize novelty and are coupled with either differentiation or cost leadership can have a positive impact on the firm's performance and (2) novelty-centered business models together with early entry into a market have a positive effect on performance. They also acknowledge the possible contingent effect of the business model in mediating between product market strategy and firm performance.

Viramäki and Vesalainen (2003) suggest possible advantages and prerequisites for successful cooperation. They state, it is important for those who plan and form strategic small- and medium-sized enterprise (SME) networks to know what kind of cooperative model a group of firms strive for, since prerequisites for cooperative success vary by setting. Hanna and Walsh (2002) argue that the purpose of networks are to increase revenue, networking is primarily a competitive response among member firms, thus small firms need to rethink their cooperative motives to benefit fully from cooperation. Wincent (2005) suggests that firm-specific traits, interfirm relationships, firm-specific attitudes toward cooperation, and partner-related attributes are not directly related to competitive outcomes but are related to one another, which provides a comprehensive picture of competitiveness building in strategic SME networks. Fuller-Love and Thomas (2004) highlight the benefits of network membership, such as sharing information, skills, and resources to enhance effectiveness, problem solving, and economies of scale. They argue, for a network to be successful, it must offer a range of opportunities that provide access to resources.

Fukugawa (2006) argues, dense networks with highly committed members initiate product development and external links that bring knowledge to the network improve technical success in innovation, and networks that engage in sales activities likely make innovations commercially successful. Ammenberg *et al.* (1999) find positive responses from customers, and cost savings from strategic SME networks. They emphasize on network governance through central coordinators and steering committees. Chaston (1995) suggests that broker competences facilitate progression of strategic SME networks, from introducing network awareness about benefits of networks and developing knowledge in business sectors to identifying ideas for cooperation. Fulop (2000) argues small business networks open up opportunities for integration, especially when operations complement one another. Their findings suggest, bottom-up initiatives are necessary, and if cooperation in the network is too formalized, some natural network benefits may diminish.

There have been some studies conducted by business practitioners and consultants. They look into the performance implications of business model innovation. Consultants at IBM conducted a worldwide survey interview with the corporate and public-sector leaders. Their finding shows that firms that were financial outperformers put twice as much emphasis on business model innovation as did underperformers (IBM Global Business Services, 2006). Giesen *et al.* (2007) propose three types of business model innovation: (1) industry models (i.e., innovations in industry supply chain), (2) revenue models (i.e., innovations in how companies generate value), and (3) enterprise models (i.e., innovations in the role the structure of an enterprise plays in new existing value chain). They find that each type of business model innovation can generate success, and innovation in enterprise models that focuses on external collaboration and partnerships is particularly effective in older companies as compared to younger ones.

Thus, it can be noted that the extant business model innovation literature focusing on value networks have clearly shown their implications towards the successful career of firms. Still, pursuing study on some more aspects could be interesting as they bear potential to expand extant understanding. A revision and expansion of the basic business model understanding is felt necessary in order to address marketing strategy decisions more closely. Following the spirit of extant business model innovation literature mentioned above, the following issues in business model innovation are considered interesting for future studies from the value network perspective of B2B context.

Marketing strategy decisions (Amit and Zott, 2001, 2012; Giesen *et al.*, 2007):

- Why do firms in the same industry innovate starkly different business model to bring their products/services to the market?
- How do positioning differences between firms influence the design of their business models?
- How do customer brand equity, technology, and channel resource differences between firms influence their business model design?

2.2 Governance of transactions (or innovations)

There are many literatures focusing on the mechanisms to govern transactions. Literatures clearly show that formal, informal or both governance mechanisms have been in use depending upon the nature and circumstances of the transactions. From the focal firm's perspective, the activities of external innovators can be organized as a collaborative community or as a market (Bourdreau and Lakhani, 2009). They further state, when innovators organize as a community, members are often willing to collaborate and work for free, and when innovators organize as market they develop multiple competing varieties of complementary goods, components, or services, with trivial cooperation among them. Tether (2002) finds that firms that engage in R&D and that are attempting to introduce higher level innovations, i.e. 'new to the market' rather than 'new to the firm' innovations are much more likely to engage in cooperative arrangements for innovation.

Introducing the notion of open innovation as a mode of innovation, Chesbrough (2006) states that the focus to see on business model innovation has gradually been evolving until recently.

He further argues firms that practice open innovation look outside the boundaries rather than relying on internal ideas to advance their businesses to leverage sources of ideas. Doing so firms also require the adoption of new, open business models designed for sharing and licensing technologies (Chesbrough, 2007, 2010). Open business models, on the top of being a subject of innovation, may prompt additional business model innovation in complementary market because of the reconfiguration of downstream activities and capabilities (Gambardella and McGahan, 2010).

Haehnel (2014) states that business model innovation opens up the opportunities that not only transform the value proposition, value architecture or revenue model of an organisation, but also inspire organization to rethink on its human value system and to build businesses that customers love employees' value. He argues, company's values should have a block on the business model canvas, more importantly company's business model innovation projects need to address those values, beliefs and practices as a core element having implication on their planned model.

Extant literature in the business model innovation area are not well developed by positioning the role of the individual, culture, value, and the cooperating arrangements in a specific theoretical model so as to address the business model innovation need emerging from B2B context. Teece (1992), for instance, argues that the rise of cooperative arrangements has overturned our existing understanding of the organization of innovation. The following issues in business model innovation are considered interesting for future studies from the governance perspective of B2B context.

- Much of the business model literature focuses on describing the elements and relationships that outline how a firm creates and markets value. It would be even more interesting to understand the antecedents of such elements and relationships. Because understanding such factors can help to align better value creation and value capture.

- How do firms innovate business model and expand business further by capturing the human value system?

2.3 Organizing resources

In the literature, there has been an increasing consensus in pursuing business model innovation as a key driver to firms' performance. Several scholars have focused business model innovation as being a vehicle for corporate transformation and renewal (e.g., Ireland *et al*., 2001; IBM Global Business Services, 2006). *Based on this understanding, business model innovation can be pursued as an improved way of organizing resources and capabilities.* Bouchikhi and Kimberly (2003) and Chesbrough (2010) have identified barriers to business model innovation in existing firms. They argue that the configurations of assets and processes, and the cognitive inability of managers to understand the value potential of a new business model are the major barriers having implication to the business model innovation endeavors. Researchers need to focus on finding way out to overcome these barriers. Some scholars deal with the issue that the business model takes shape through a process of experimentation (Hayashi, 2009; McGrath, 2010), which might differ for different organizations in different competitive landscapes. Sheehan and Stabell (2007), for example, propose a three-step process of analysis to help managers in knowledge-intensive organizations improve their business models.

Svejenova *et al.* (2010) argue on the need of specific leadership for business model innovation. Similarly, Doz and Kosonen (2008) propose that companies could move towards being more agile, which could be possible by developing three meta-capabilities: strategic sensitivity, leadership unity, and resource flexibility. Smith *et al*. (2010) emphasize on the effective management of complex business models. They state that a good management depends on leadership that can make dynamic decisions, build commitment, learn actively at multiple levels and engage conflict. In the same vein, Santos *et al*. (2009) also emphasize the importance of the behavioral aspects involved in business model innovation. They suggest that mutual engagement and organizational justice are very important and more specifically managers should pay attention on the relational dynamics at the level of informal organization.

Firms having good business sense develop capabilities, which can bring innovation in their business model (Chesbrough, 2010:354). Such capability can impact how companies think about business to business relations. The notion of business model encompasses central ideas in business strategy and its associated theoretical traditions. Several scholars agree on the fact that the business model can be a source of competitive advantage that is different from the firm's product market position (Christensen, 2001). Scholars in strategy have been limiting their focus mainly in two directions: traditional and business model. Traditional emphasis of strategy focuses on competition, value capture, and competitive advantage while the business models seem to focus more on partnership, joint value creation and cooperation (Mäkinen and Seppänen, 2007; Mansfield and Fourie, 2004; Magretta, 2002). Thus, it seems obvious that the business model encompasses the pattern of the firm's economic exchanges with external parties (Zott and Amit, 2008). Following this notion Seddon *et al*. (2004) state that the business model outlines the essential details of a firm's value proposition for its various stakeholders along with the activity system the firm uses to create and deliver value to its customers.

In spite of the conceptual differences between business model and certain aspects of firm strategy, some scholars have also emphasized on the role of business model in a firm's strategy. For example, Richardson (2008) says, the business model explains how a firm's activities work together to execute its strategy. According to Teece (2007), the business model reflects a hypothesis about what customers want and how an enterprise can best meet such needs, and makes money. Following similar spirit, Casadesus-Masanell and Ricart (2010) also state, the business model serves as a reflection of a firm's realized strategy.

The following issues in business model innovation are considered interesting for future studies from the organizing resources/capabilities perspective of B2B context.

- Companies having good business sense develop capabilities, which can help innovate their business model (Chesbrough, 2010: 354). Such capability can impact how companies think about business to business relations. What happens to business models when firms interact not for exchange of goods/services but for innovation capability?

2.4 Sustainable exchanges

In the literature, business model innovation has been recognized as a key to delivering greater social and environmental sustainability in the industrial system (Lüdeko-Freud, 2010). However, understanding of sustainable business model and the options available for innovation for sustainability seems limited at present. Even though there is extensive literature on the theory of business models for delivering sustainability, there is no comprehensive view of how firms should approach embedding sustainability in their business models. Amit and Zott (2001, 2012) recommend novelty and efficiency inspired activity systems to innovate business models (e.g., by adding novel activities through backward and forward integration, by linking activities in novel ways, and by changing one or more parties that perform any of the activities). Elkington (1998, 2004) simultaneously consider and balance economic, environmental, and social goals from the micro-economic perspective (e.g., by positioning sustainability as an integrated concept composed of environmental, social, and economic criteria). These perspectives could be intertwined together to develop a business model framework.

In the B2B context the relationship between or among organizations becomes a critical issue as it influences the business they perform presently or intend to perform throughout the years in the future. Such relationships lead to an increasing interaction between different actors, which potentially provide complementary response to insecurity arising from development and use of technologies. When accompanied with the interactive meetings, the actors can realize that cooperation does help them to grow their business further and even up to a longer period. Highlighting the role of networked companies, Bullinger *et al.* (2004) state, it is necessary for small and medium sized enterprises (SMEs) to link different companies, research facilities, suppliers and customers in a dense innovation network that enables them to share knowledge and profit from complementary competencies. With careful business model redesign it is possible for mainstream businesses to more readily integrate sustainability into their business and for new start-ups to design and pursue sustainable business from the outset

(Stubs and Cocklin, 2008; Porter and Cramer, 2011). Bocken *et al*. (2013) argue that sustainable business models capture economic, social and environmental value for a wide range of stakeholders.

Sustainability as a term has been referred to an integration of social, environmental, and economic responsibilities in the literature of business disciplines such as management and operations. However, there are inconsistencies in the understanding of sustainability in the business model literature. Thus, the following research topic can be interesting to study:

- How can the term sustainability be defined and applied to business model innovation?

3. Summary and conclusion

Based on the preliminary review of the selected business model literature in the B2B context, this paper uncovers four major research themes namely: value networks, governance of transactions, organizing resources, and sustainable exchanges and seven research topics to explore further, as summarized in Table 3. We believe these research topics can be studied by applying the theoretical lenses from theories such as transaction cost economics (TCE), relational contracting theory (RCT), the resource-based view (RBV) and the dynamic capability view (DCV).

Table 3: Research agenda

	Seven research topics
1	Why do firms in the same industry innovate starkly different business model to bring their products/services to the market?
2	How do positioning differences between firms influence the design of their business models?
3	How do customer brand equity, technology, and channel resource differences between firms influence their business model design?
4	What are antecedents of business model elements? Do these antecedents influence the value creation potential of business model design elements?
5	How can firms use human value system to innovate business models?
6	How do the business models designed to facilitate exchange of goods and services differ from those models designed to facilitate exchange of innovation capability?
7	How can the term sustainability be defined and applied to business model innovation?

All the research topics mentioned in Table 3 will stimulate additional theory building and conceptual development within business model innovation. Works to answer these topics can contribute to network innovation and thus business model innovation. Studies on the impact of resources, capabilities and positioning of firms will always require consideration on the methods to elicit truthful responses – many managers may wish not to admit to the role of resources, capabilities and positioning of firms in decision making but rather emphasize their own free determination to support the decisions. Thus, the potential approaches for addressing the three first research topics center around case studies and surveys. These approaches can help know how firms design their business models (based on their resources and capabilities) to bring their products to markets, and the influence of different positioning choices to their business model designs. The fourth research topic can be studied designing latent growth modeling with longitudinal data from strategic networks. For instance, a study to examine the influence of network size, the extent to which a network is based on firm incentives (bottom-up formation), and the extent of development of the governance mechanism on a network's business model innovation performance can be designed in an empirical setting (that could be Norwegian). Similarly, topics 5, 6 and 7 can also be studied using similar approaches as for the three first research topics.

The business model is conceptually placed between a firm's input resources and market outcomes, and it "embodies nothing less than the organizational and financial 'architecture' of the business" (Teece, 2010: 173). This paper provides insights on some important future research topics, and invites researcher to study these topics.

References

Abdelkafi, N., Makhotin, S., and Posselt, T. 2013. Business Model Innovations for Electric Mobility - What Can Be Learned from Existing Business Model Patterns? *International Journal of Innovation Management*, Vol. 17 No. 1, pp. 1340003:01- 1340003:41.

Afuah, A. 2004. *Business models: A strategic management approach*. New York: Irwin/McGraw-Hill.

Afuah, A., and Tucci, C. L. 2001. *Internet business models and strategies: Text and cases*. New York: McGraw-Hill.

Amit, R., and Zott, C. 2000. *Value drivers of e-commerce business models* (No. 2000-2006). Fontainebleau: INSEAD.

Amit, R., and Zott, C. 2001. Value creation in e-business. *Strategic Management Journal*, Vol. 22, pp. 493-520.

Amit, R., and Zott, C. 2012. Creating value through business model innovation. *MIT Sloan Management Review*, Vol. 53 No. 3, pp. 42-49.

Amit, R., and Zott, C. 2010. *Business model innovation: Creating value in times of change*. Working Paper, No.WP-870. IESE Business School, Spain.

Ammenberg, J., Börjesson, B., and Hjelm, O. 1999. Joint EMS and group certification: a cost-effective route for SMEs to achieve ISO 1400. *Greener Management International*, Vol. 28, pp. 23-31.

Bocken, N., Short, S., Rana, P., and Evans, S. 2013. A value mapping tool for sustainable business modelling. *Corporate Governance*, Vol. 13 No. 5, pp. 482-497.

Bouchikhi, H., and Kimberly, J. R. 2003. Escaping the identity trap. *MIT Sloan Management Review*, Vol. 44 No. 3, pp. 20-26.

Boudreau, K. J., and Lakhani, K. R. 2009. How to manage outside innovation. *MIT Sloan Management Review*, Vol. 50 No. 4, pp. 69-76.

Bullinger, H.-J., Auernhammer, K., and Gomeringer, A. 2004. Managing innovation networks in the knowledge-driven economy. *International Journal of Production Research*, Vol. 42 No. 17, pp. 3337-3353.

Casadesus-Masanell, R., and Ricart, J. E. 2010. From strategy to business models and to tactics. *Long Range Planning*, Vol. 43, pp. 195-215.

Chaston, I., 1995. Danish technological institute SME sector networking model: implementing broker competencies. *Journal of European Industrial Training*, Vol. 19 No. 1, pp. 10-17.

Chesbrough, H. 2006. *Open Business Models — How to Thrive in the New Innovation Landscape.* Boston, MA: Harvard Business School Press.

Chesbrough, H. W. 2007. Business model innovation: It's not just about technology anymore. *Strategy and Leadership*, Vol. 35, pp. 12-17.

Chesbrough, H. 2010. Business model innovation: Opportunities and barriers. *Long Range Planning*, Vol. 43 No. 2/3, pp. 354-363.

Chesbrough, H., and Rosenbloom, S. 2002. The role of the business model in capturing value from innovation: Evidence from Xerox Corporation's technology spinoff companies. *Industrial and Corporate Change*, Vol. 11 No. 3, pp. 529-555.

Christensen, C. M. 2001. The past and future of competitive advantage. *MIT Sloan Management Review*, Vol. 42 No. 2, pp. 105-109.

Doz, Y. L., and Kosonen, M. 2008. *Fast strategy: How strategic agility will help you stay ahead of the game*. Pearson Education.

Elkington, J. 1998. *Cannibals with Forks: The Triple Bottom Line of the 21st Century*, New Society Publishers, Stoney Creek, CT.

Elkington, J. 2004. Enter the triple bottom line. In Henriques, A. and Richardson, J. (Eds.), *The Triple Bottom Line: Does It All Add up*? Earthscan, London, pp. 1-16.

Fukugawa, N. 2006. Determining factors in innovation of small firm networks: a case of cross industry groups in Japan. *Small Business Economics*, Vol. 27 No. 2, pp. 181-193.

Fulop, L. 2000. A study of government-funded small business networks in Australia. *Journal of Small Business Management*, Vol. 38 No. 4, pp. 87-92.

Fuller-Love, N., and Thomas, E. 2004. Networks in small manufacturing firms. *Journal of Small Business and Enterprise Development*, Vol. 11 No. 2, pp. 244-253.

Gambardella, A., and McGahan, A. M. 2010. Business model innovation: General purpose technologies and their implications for industry structure. *Long Range Planning*, Vol. 43, pp. 262-271.

Giesen, E., Berman, S. J., Bell, R., and Blitz, A. 2007. Three ways to successfully innovate your business model. *Strategy and Leadership*, Vol. 35, pp. 27-33.

Haehnel, N. 2014. valuecreationthroughvalues in businessmodels (Blogpost, August 2015). Business modelinnovation, http://blog.business-model-innovation.com/2014/08/value-creation-through-values-in-business-models/

Hamel, G. 2000. *Leading the revolution*. Boston: Harvard Business School Press.

Hanna, V., and Walsh, K. 2002. Small firm networks: a successful approach to innovation? *R&D Management*, Vol. 32 No. 3, pp. 201-207.

Hayashi, A. M. 2009. Do you have a plan "B"? *MIT Sloan Management Review*, 51(1), pp. 10-11.

IBM Global Business Services. 2006. *Expanding the innovation horizon: The global CEO study 2006*. Retrieved November, 2015 from www-7.ibm.com/sg/pdf/global_ceo_study.pdf

Ireland, R. D., Hitt, M. A., Camp, M., and Sexton, D. L. 2001. Integrating entrepreneurship and strategic management actions to create firm wealth. *Academy of Management Executive*, Vol. 15, pp. 49-63.

Johnson, M. W., Christensen, C. M., and Kagermann, H. 2008. Reinventing your business model. *Harvard Business Review*, Vol. 86 No. 12, pp. 50-59.

Lüdeko-Freud, F. 2010. Towards a conceptual framework of business models for sustainability. In: ERSCP-EMU Conference, Delft, The Netherlands, pp. 1-28.

McGrath, R. G. 2010. Business models: A discovery driven approach. *Long Range Planning*, Vol. 43, pp. 247-261.

Magretta, J. 2002. Why business models matter. *Harvard Business Review*, Vol. 80 No. 5, pp. 86-92.

Mahadevan, B. 2000. Business models for Internet-based e-commerce: An anatomy. *California Management Review*, Vol. 42 No. 4, pp. 55-69.

Mäkinen, S., and Seppänen, M. 2007. Assessing business model concepts with taxonomical research criteria: A preliminary study. *Management Research News*, Vol. 30, pp. 735-746.

Mansfield, G. M., and Fourie, L. C. H. 2004. Strategy and business models - strange bedfellows? A case for convergence and its evolution into strategic architecture. *South African Journal of Business Management*, Vol. 35 No. 1, pp. 35-44.

Morris, M., Schindehutte, M., and Allen, J. 2005. The entrepreneur's business model: Toward a unified perspective. *Journal of Business Research*, Vol. 58, pp. 726-35.

Nonaka, I., and Takeuchi, H. 1995. *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. Oxford university press.

Osterwalder, A. 2004. *The business model ontology - A proposition in a design science approach*. Dissertation 173, University of Lausanne, Switzerland.

Osterwalder, A., Pigneur, Y., and Tucci, C. L. 2005. Clarifying business models: Origins, present and future of the concept. *Communications of the Association for Information Science (CAIS)*, Vol. 16, pp. 1-25.

Patzelt, H., Knyphausen-Aufseb, D., and Nikol, P. 2008. Top management teams, business models, and performance of biotechnology ventures: An upper echelon perspective. *British Journal of Management*, Vol. 19, pp. 205-221.

Porter, M. E., and Kramer, M. R. 2011. Creating shared value. *Harvard Business Review*, Vol. 89, Nos 1/2, pp. 62-77.

Richardson, J. 2008. The business model: An integrative framework for strategy execution. *Strategic Change*, Vol. 17 No. 5/6, pp. 133-144.

Santos, J., Spector, B., and Van Der Heyden, L. 2009. *Toward a theory of business model innovation within incumbent firms*. Working paper no. 2009/16/EFE/ST/TOM, INSEAD, Fontainebleau, France.

Schneider, S., and Spieth, P. 2013. Business model innovation: towards an integrated future research agenda. *International Journal of Innovation Management*. Vol. 17 No. 1, pp. 1340001-1340034.

Seddon, P. B., Lewis, G. P., Freeman, P., and Shanks, G. 2004. The case for viewing business models as abstractions of strategy. *Communications of the Association for Information Systems,* Vol. 13, pp. 427-442.

Shafer, S. M., Smith, H. J., and Linder, J. C. 2005. The power of business models. *Business Horizons*, Vol. 48 No. 3, pp. 199-207.

Sheehan, N. T., and Stabell, C. B. 2007. Discovering new business models for knowledge intensive organizations. *Strategy and Leadership*, Vol. 35, pp. 22-29.

Smith, W. K., Binns, A., and Tushman, M. L. 2010. Complex business models: Managing strategic paradoxes simultaneously. *Long Range Planning*, Vol. 43, pp. 448-461.

Stubbs, W., and Cocklin, C. 2008. Conceptualizing a sustainability business model. *Organ. Environ*., Vol. 21 No. 2, pp. 103-127.

Svejenova, S., Planellas, M., and Vives, L. 2010. An individual business model in the making: A chef's quest for creative freedom. *Long Range Planning*, Vol. 43, pp. 408-430.

Teece, D.J. 1992. Competition, cooperation and innovation: organizational arrangements for regimes of rapid technological progress. *Journal of Economic Behaviour and Organization*, Vol. 18, pp. 1-25.

Teece, D. J. 2007. Explicating dynamic capabilities: The nature and micro foundations of (sustainable) enterprise performance. *Strategic Management Journal*, Vol. 28, pp. 1319-1350.

Teece, D. J. 2010. Business models, business strategy and innovation. *Long Range Planning*, Vol. 43 No. 2/3, pp. 172-194.

Tether, B. S. 2002. Who co-operates for innovation, and why: an empirical analysis. *Research policy*, Vol. 31 No. 6, pp. 947-967.

Tikkanen, H., Lamberg, J.-A., Parvinen, P., and Kallunki, J.-P. 2005. Managerial cognition, action and the business model of the firm. *Management Decision*, Vol. 43 No. 5/6, pp.789-809.

Vargo, S. L., and Lusch, R. F. 2008. Service-dominant logic: continuing the evolution. *Journal of the Academy of Marketing Science*, Vol. 36 No. 1, pp. 1-10.

Viramäki, E., and Vesalainen, J. 2003. Modelling different types of multilateral co-operation between SMEs. *Entrepreneurship & Regional Development*, Vol. 15 No. 1, pp. 27-47.

Voelpel, S., Leibold, M., Tekie, E., and Von Krogh, G. 2005. Escaping the red queen effect in competitive strategy: Sense-testing business models. *European Management Journal*, Vol. 23 No. 1, pp. 37-49.

Wincent, J. 2005. How do firms build competitiveness in strategic SME networks? *Journal of Enterprising Culture*, Vol. 13 No. 4, pp. 381-406.

Zott, C., and Amit, R. 2007. Business model design and the performance of entrepreneurial firms. *Organization Science*, Vol. 18, pp. 181-199.

Zott, C., and Amit, R. 2008. The fit between product market strategy and business model: Implications for firm performance. *Strategic Management Journal*, Vol. 29, pp. 1-26.

Zott, C., and Amit, R. 2009. The business model as the engine of network-based strategies. In P. R. Kleindorfer and Y. J Wind (Eds.), *The network challenge*, pp. 259-275.

Zott, C., and Amit, R. 2010. Designing your future business model: An activity system perspective. *Long Range Planning*, Vol. 43, pp. 216-226.

Zott, C., Amit, R., and Massa, L. 2011. The business model: recent developments and future research. *Journal of Management*, Vol. 37 No. 4, pp. 1019-1042.

This paper reviews the literature on business models in the business-to-business (B2B) context and proposes a research agenda that can be explored by future studies using various management and organizational theories. We outline four research themes and seven research topics for research on business model innovations in the B2B context. Further studies on these topics can make significant contributions to the business model literature.

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