

A framework for sustainable interorganizational business model

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Abstract

Purpose - This paper aims to use organizational theories to frame propositions derived from an emerging framework of sustainable interorganizational business model (SIOBM), and open research avenues that could examine the existence of this framework.

Design/methodology/approach - Drawing on previous organizational theory review papers in business model innovation and sustainability literatures, relational contracting theory (RCT), resource dependence theory (RDT), transaction cost economics (TCE), and resource-based view (RBV) have been used as theoretical lenses to develop propositions, which to some extent reflect the SIOBM framework.

Findings - The authors developed SIOBM framework and then framed four propositions based on this framework showing potential of the further examination of the SIOBM in the interorganizational value creation process.

Social implications - As the aim of SIOBM framework is to enhance the strength of organizations' business models enabling them create value for the long future, further work in this area has the potential for positive cooperative, environmental, social, and economic impact. Development of business cases incorporating SIOBM framework and propositions could lead to enhance acceptance and adoption of SIOBM in practice. This framework provides a starting point for a common understanding of SIOBM among chief executive officers (CEO). Specifically, the CEOs who are dreaming of accumulating long-term success of their business models in the modern complex networked business operations, this paper provides some elementary insights that might lead their idea generation processes towards the success and prosperity of the organization they are responsible for.

Originality/Value - The paper discusses two themes: How can the term sustainability be defined and applied to business model innovation? Is there a relationship between the integration of the concepts of sustainability and business model and long-term economic success? Use of the established theories to develop SIOBM framework encourages further examinations of this important topic, which is an emerging issue having potential to improve value creation.

Keywords - Business model innovation, Sustainability, Resource dependence, Transaction cost economics, Relational contracting, Resource-based view.

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1. Introduction

Sustainable interorganizational business model can be an imperative to create value for the modern firms/or organizations. Extant literatures in the business model innovation (BMI) area are not well developed by positioning the corresponding role of the cooperating arrangements in a specific theoretical model so as to address the BMI need emerging from inter-organizational perspective. Teece (1992) argues that the rise of cooperative arrangements has overturned our existing understanding of the organization of innovation. Understanding of sustainable business model and the options available for innovation for sustainability seems limited at present. However, some remarkable efforts have been pursued to advance the BMI knowledge in interorganizational relationships context (e.g., Amit and Zott, 2000, 2001, 2010, 2012). For instance, the role of governance mechanism such as cooperation and collaboration has been captured in the BMI literatures.

Building on Amit and Zott (2001, 2012), and Elkington (1998, 2004), this paper offers a sustainable interorganizational business model framework. Amit and Zott (2001, 2012) recommend novelty and efficiency inspired activity systems to innovate business model (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). While, 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). First we conceive the sustainable interorganizational relationships bottom line in the light of Elkington (1998, 2004) and then we integrate existing viewpoints in business model innovation as

advanced by Amit and Zott (2012), into it so as to offer a fresh concept namely ‘*sustainable interorganizational business model*’ which is abbreviated to SIOBM.

In the literatures, BM has been increasingly 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. Sustainability as a term has been increasingly referred to an integration of social, environmental, and economic responsibilities in the literature of business disciplines such as management and operations. However, a review of the literature will show that the term sustainability has been inconsistently defined and applied in the extant research. Thus, this lack of an explicit consideration of cooperation and economic criteria in models and failure to consistently define sustainability to the field of business model, lead to the following research questions:

RQ1. How can the term sustainability be defined and applied to business model innovation?

RQ2. Is there a relationship between the integration of the concepts of sustainability and business model and long-term economic success?

More specifically, do firms that engage in sustainable interorganizational business model (SIOBM) practices attain higher economic performance than firms that concentrate solely on economic performance?

The answer to these research questions will help to clarify and begin to defuse the debate surrounding the relationship between Cooperative, environmental and social performance on one hand, and economic performance on the other. Further, the blending of sustainability perspective with the existing business model frameworks not only strengthens understanding in business model but also advances it further. Modern organizations are mostly a member of a greater and extended network. Cooperation between or among the exchange partners is a vital content emerged from interorganizational area, and the role of this content is proven as an important vehicle of growth, success and sustainability of the organizations. Therefore, the inclusion of this interorganizational content can extend business model innovation a step further.

The authors answer the research questions mentioned above by conducting a literature review and subsequently using conceptual theory building (Meridith, 1993) to develop a framework of SIOBM, along with related research propositions. Specifically, the remainder of the paper is organized as follows. In the next section a review of business model literature is presented. This is followed by a brief review of sustainability literatures and an introduction of a framework of SIOBM which expands the concept of sustainability from the organization to interorganizational relationships. Afterwards, propositions surrounding the framework are introduced, based on an integration of the sustainability literature, along with resource dependency theory (RDT), relational contracting theory (RCT), transaction cost economics (TCE), and resource-based view (RBV).The final section of the paper provides discussion on the theoretical and managerial implications of this theory development.

2. Business model innovation in literature

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).

A review conducted by Zott *et al.* (2011) reveals that the business model revolves around customer-focused value creation, which is also in line with the findings as reported by earlier studies (i.e., Chesbrough and Rosenbloom, 2002; Mansfield and Fourie, 2004). 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.

Literatures on business models in strategy field have mainly focused on the notion of activities around the aspects like: the networked nature of value creation, the relationship between business models and firm performance, and the distinction between the business

model and other strategy concepts. Such scenarios trigger a need to continue with the conceptual studies so as to offer an acceptable definition of business model. Zott *et al.* (2011) have revealed the three major shortcomings in the existing business model conceptions. According to them: business model does not involve a linear mechanism for value creation from suppliers to the firm to its customers, it does not refer to firm positioning in product markets based on differentiation or cost leadership in certain activities, it does not describe or prescribe the areas of business in which a firm becomes active, and it cannot be reduced to issues that only concern the internal mechanisms of firms. They however conclude that the business model can be a source of competitive advantage.

Apart from considering business models to facilitate technological innovation and the management of technology, firms can view the business model itself as a subject of innovation (Mitchell and Coles, 2003). Along with the introduction of the notion of open innovation as a mode of innovation by Chesbrough (2006), focus to see on business model innovation has gradually been evolving until recently. Following the idea of open innovation firms rather than relying on internal ideas to advance businesses look outside their boundaries so as to leverage sources of ideas. This also requires 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 as a consequence of the reconfiguration of downstream activities and capabilities (Gambardella and McGahan, 2010).

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.

In the literature, there has been an increasing consensus in pursuing business model innovation as a key driver to firm 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; Demil and Lecocq, 2010).

Highlighting the role of business model innovation, Serrat (2012) states, new technology-based and low-cost rivals have become established players and as a result, need of reshaping industries and redistributing profits is driving business model innovation worldwide. According to him, in a globalized economy where 2.5 billion people live on less than \$ 2 a day, the growing significance of business models become a logical reaction to excessive choices and associated competition from deregulation and technological change.

Business model innovation opens up the opportunity to not only transform the value proposition, value architecture or revenue model of an organization, it is a chance for organization to rethink on its human value system and build businesses that customers love employees' value and investors are excited about (Haehnel, 2014). 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.

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). According to Teece, the business model complements

technology, but technology is seen as an enabler of the business model rather than as a part of the concept per se. The core logic of a business model instead, revolves around a firm's revenues and costs, its value proposition to the customer, and the mechanisms to capture value. Thus, a business model is not only a vehicle for innovation but also a subject of innovation.

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.

Given such scenario of the research focus, this paper highlights the contributions of selected existing studies on business model and organization's sustainability perspective and taking a lead from them draws a sustainable interorganizational business model framework. Following an interesting business model innovation area "strategic issues, such as value creation, competitive advantage, and firm performance" as identified by Zott *et al.* (2011: 1020), this paper aims to explore the way firms innovate sustainable business models through interactions with their exchange partners. Such interactions are presumed to make use of the lenses from cooperation and collaboration mechanism as evolved in organizational theories namely RDT, RCT, TCE, and RBV. Thus, drawing a framework on sustainable inter-organizational business model (SIOBM) has become a primary focus of this paper. The following section provides a brief review on the notion of sustainability and draws sustainable interorganizational relationships bottom line.

3. Sustainability in the literature

The notion on sustainability has seemingly become popular especially in the field of environment and development. Brundtland Commission (i.e., World Commission on Environment and Development, 1987, p. 43) provides the most well-adapted and most often quoted definition of sustainability as, “development that meets the needs of the present without compromising the ability of future generations to meet their needs.” The 2005 World summit on social development has identified sustainable developmental goals such as social development, economic development, and environmental protection. The report of this summit can thus be considered as providing basic framework for sustainability. The report offers description of three overlapping pillars (i.e., social, economic, and environmental) indicating that these pillars of sustainability are not mutually exclusive and can be mutually reinforcing. The three pillars have served as a common ground for numerous sustainability standards and certification systems in recent years, in particular food industry (Manning *et al.*, 2012; Reinecke *et al.*, 2012). A sustainability standard can be defined as a set of voluntary predefined rules, procedures, and methods to systematically assess, measure, audit and/or communicate the social and environmental behavior and/or performance of firms” (Gilbert *et al.*, 2011, p. 24).

Organizational and management theorists have considered sustainability: as a sub topic of organizational effectiveness and as a unique goal for organizations that involves all organizations and their environment. Bernard (1938); March and Simon (1958); and Thompson (1967) have viewed that the larger problem of organizational effectiveness is linked with the ecologically sustainable organizations. They focus more on creating effective and efficient firms that can survive in changing positions. Current organizational theorists

including Schmidheiny (1992) have made effort to apply the notion of sustainability down to the level of an individual organization's effectiveness. The sustainability standards should communicate information about how goods are produced, processed and traded, business, government and many others are concerned that the amount of standards are proliferating to a degree where it is getting confusing for both consumers (Mueller *et al.*, 2009) and companies (Jamali, 2010).

Sustainable development consists of balancing local and global efforts to meet basic human needs without destroying or degrading the natural environment (Kates, *et al.*, 2005). Such understandings on sustainable development trigger to focus more on relationship between human needs and environment. Thus, looking into such macro-economic and societal perspective of sustainability, it is difficult for organizations to apply and provide guidance regarding how they identify future versus present needs, determine the technologies and resources required to meet those needs, and understand how to effectively balance their responsibilities to different stakeholders including employees, and investors (Starik and Rands, 1995).

Some scholars including Srivastava (1995), and Stead and Stead (1996) state that macro-economic and societal perspective of sustainability seems far reaching, organizations often find it difficult to determine their individual roles within this broader perspective. Thus, scholars such as: Srivastava (1995); Jennings and Zandbergen (1995); Starik and Rands (1995) have pioneered their research efforts to focus more on micro-economic applications of sustainability in the field of management, operations and engineering. However, they conceptualize organizational sustainability limiting their focus only with ecological sustainability that implicitly captures social and economic responsibilities. Starik and Rands

(1995) argue that the micro-economic perspective can also take a perspective similar to that of the macro-economic. These authors define sustainability as “the ability of one or more entities, either individually or collectively, to exist and flourish (either unchanged or in evolved terms) for lengthy timeframes, in such a manner that the existence and flourishing of other collectivities of entities is permitted at related levels and in related systems” (p. 909). In the same vein, Shrivastava (1995) describes sustainability as offerings, “the potential for reducing long-term risks associated with resource depletion, fluctuations in energy costs, product liabilities, and pollution and waste management” (p. 955).

The operations management researchers (e.g., Hill, 2001; Sarkis, 2001; Daily and Huang, 2001) have also considered sustainability as the ecological perspective without explicit incorporation of the social aspects of sustainability. Whereas, engineering literatures (e.g., Sikdar, 2003; Góncz *et al.*, 2007) have been more encompassing as they explicitly incorporate the social, economic, and environmental dimensions of the macro-economic perspective of sustainability. Considering such developments in the understanding of sustainability, a wise balance among economic, environmental and social performance of the organization(s) can be considered as prerequisite for the organizational sustainability. However, this understanding may not fully apply for the sustainability of a network of organizations (i.e., inter-organizational relationships).

Interorganizational relationship as the perspective of a firm have grown significantly especially during the last five decades. It refers to its connections to other parties or relationships, and to the nature of the environment it relates within a focal relationship (Anderson *et al.*, 1994). According to them two connected relationships of interest themselves can be both directly and indirectly connected with other relationships that have some bearing

on them, as part of a larger business network (i.e., a focal relationship is connected to several different relationships that either the supplier or the buyer has). A firm as an actor performs exchange activities with another firm making use of its available resources, which shows business relationships in general are characterized in the form of activities, actors, and resources. The primary function of relationship employing interaction of two partner firms reveals positive and negative effects, and secondary relationship function employing partner's interaction reveals the indirect positive and negative effects because this function is directly or indirectly connected to other relationships. The effects of primary function of relationship correspond to the activities, resources, and actors, are efficient as they gain leveraged resource heterogeneity and mutual interest of the actors. While the effects from secondary function of relationship correspond to the connections between relationships are to some extent complex because of presence of chain of activities involving more than two firms, constellations of resources controlled by more than two firms, and shared network perceptions by more than two firms (Anderson *et al.*, 1994). The primary function of the relationship lets the partners learn about each other's resources and find new and better ways to combine them so as to have innovative effect (Lundvall, 1985).

In the interorganizational 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. Interorganizational 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 mutual cooperation does help them to grow their business further and even up to a longer period of time. 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. There have been plenty of evidences that can highlight the role of cooperating arrangements employed by the actors. For instance, interest in cooperative arrangements for innovation with suppliers grew out of the success, especially during the 1980s, of Japanese automobile and electronic firms. The success of these firms has been attributed to their close supplier relations (among other factors), with suppliers being closely involved in the innovation process (Liker *et al.*, 1996).

Sustainability thinking is also accompanied in the business model innovation context. 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. Business model innovations for sustainability are defined as “ Innovations that create significant positive and/or significantly reduced negative impacts for the environment and/or society, through changes in the way the organization and its value-network create, deliver value and capture value (i.e. create economic value) or change their value propositions (Bocken *et al.*, 2014, p. 44)”.

Thus, based on the above mentioned literatures, sustainability in interorganizational relationships can be perceived as a broader level construct consisting of four components: the cooperative performance, environmental performance, social performance, and economic performance. Figure 1 shows a visual representation of these four components. This

perspective corresponds to the idea of the triple bottom line, a concept developed by Elkington (1998, 2004), which simultaneously considers and balances economic, environmental, and social goals from the micro-economic perspective. We have added cooperative performance over and above Elkington's sustainability perspective in order to explore the understanding of sustainability in the interorganizational relationships context. The reason for this is to accommodate the component that keeps the network of organizations alive for a longer time span, and that additional component is termed as "Cooperative Performance".

Given the triple bottom line approach, some may doubt on the need of this dimension and argue that the social performance dimension can sufficiently represent it. We contend that this is possible for organizational sustainability, but this can offer only a trivial contribution in the sustainability of a network of organizations. Thus, there is always an additional need of cooperative performance on the top of the triple bottom line sustainability view point that can inform the accurate understanding on the 'sustainable interorganizational relationships'. Therefore, we propose a sustainable interorganizational relationships bottom line. Figure 1 visualizes the bottom line required for sustainability to the networks of organizations.

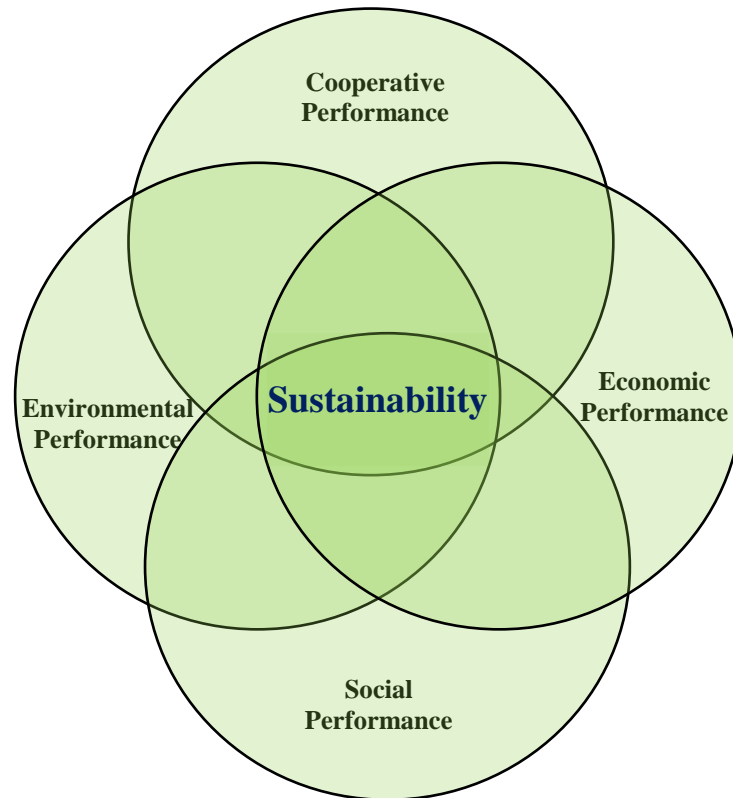


Figure1. Sustainable interorganizational relationships bottom line

The four dimensions of sustainable interorganizational relationships suggest that the intersection of cooperative, environmental, social, and economic performance corresponds to several activities that organizations routinely perform. The performance outcomes from these intersections not only positively affect the natural environment and society, but also result in long term economic benefits and competitive edge for the firms.

4. Supporting facets of the sustainable interorganizational relationships bottom line

Other aspects of sustainability that emerged from our review of the sustainability literature, but which are not included in explicit definitions, were novelty, lock-in, complementarities,

and efficiency (Amit and Zott, 2012). We have adapted these sources of value drivers as supporting facets of the sustainable interorganizational relationships. The extant literatures in business model innovation indicate that these sources of value drivers if adapted in consideration with the sustainable interorganizational relationships bottom line (mentioned above) can meaningfully advance understanding in business model innovation. Business model literatures reveal that the business model innovation is framed in the context of changing the value proposition for the customer. However, it is more than just changing the product and service offering for the customer; business model innovation involves changing ‘the way you do business’, rather than ‘what you do’ and must go beyond product and process (Amit and Zott, 2012). Business model innovation shifts the focus away from developing technologies towards creating new systems (Johnson and Suskewicz, 2009). We highlight each of the supporting facets next, and show the relationship between these supporting facets of sustainability. No other constructs appeared as consistently in the extant literature.

4.1 Novelty

While not a part of operational definitions of sustainability in the extant literature, the concept of novelty was reoccurring theme in the sustainability literature described earlier. Novelty captures the degree of business model innovation that is embodied by the activity system (Amit and Zott, 2012). In addition to the existence of the introduction of new products and services, new methods of production, distribution, or marketing, or the tapping of new markets Amit and Zott (2001) have revealed that e-businesses innovate new ways of conducting and aligning commercial transactions; they create value by connecting previously unconnected parties, eliminating inefficiencies in the buying and selling processes through adopting innovative transaction methods. Their finding reports that the unique characteristics

of virtual markets (i.e., overcoming of the geographical and physical boundaries, potential information flow from customers to vendors, and other novel information bundling and channeling techniques) make the endless possibilities for innovation. They report, novelty and lock-in (i.e., two of their value drivers) are linked in two ways: firstly, the innovators have an advantage in attracting and retaining customers, and secondly, being first to market give them success in terms of increased revenue.

Amit and Zott (2001) also report novelty and complementarities are interlinked because innovation of the e-businesses resides in their complementary elements (e.g., resources and capabilities). Their finding also justified linkage between novelty and efficiency. They argue that certain features of the e-businesses may be due to the novel assets that can be created and exploited in the context of virtual market. Thus, based on such implications of novelty, it can be concluded that it not only drives value creation for the time being, rather it captures tremendous potential of value creation for a longer period of time. Within the context of our framework, we define novelty as the ability of a firm to design new transaction structure, new transaction content, and new incentives mechanism.

4.2 Lock-in

While not included in the stated definitions, lock-in is also mentioned extensively within discussion of organizational stability. For example, Williamson's (1975) transaction costs framework, and Shapiro and Varian's (1999) network externalities, manifest lock-in as switching costs. According to Amit and Zott (2012), lock-in refers to those business model activities that create switching costs for partners to stay and transact within the activity system. An e-business motivates its customers to engage in repeat transactions, which in a

way provide incentives for the customers to be locked-in with the e-business (Amit and Zott, 2001). Lock-in occurs along with the increased transactions volume that offers lower opportunity costs for vendor and more willingness to pay for the customer. Furthermore, efficiency and complementarities as sources of value creation can also be helpful in fostering lock-in (Amit and Zott, 2001). They also report, when an e-business creates lock-in, this can also have positive effects on its efficiency and on the degree to which it provides for complementarities. Within the context of our framework, we define lock-in as the ability of firms to continue business transactions with their partners across the long future.

4.3 Complementarities

An organization's sustainability initiatives and its corporate strategy must be closely interwoven, rather than separate programs that are managed independently of one another (Shrivastava, 1995). Complementarities of resource and capability have been a prevalent strategic issue since early 1990s. Complementarities refer to the value-enhancing effect of the interdependencies among business model activities (Amit and Zott, 2012). Complementarities are present whenever having a bundle of goods together provides more value than the total value of having each of the goods separately (Amit and Zott, 2001). Their finding suggests that e-businesses leverage the potential for value creation by offering bundle of complementary products and services to their services. Thus, resource and capability complementarities can be attributed between partners, between product and services, between assets, between technologies, and between other activities. Within the context of our framework, we define complementarities as the ability of firms to make use of the resource and capabilities available to their exchange partners.

4.4 Efficiency

Efficiency refers to the cost savings through the interconnections of the activity system (Amit and Zott, 2012). Transaction efficiency increases when the cost per transaction decreases (Williamson, 1975, 1979, 1983). The finding of Amit and Zott (2001) also reveals transaction efficiency as one of the primary value drivers for e-business. According to them, the other drivers to enhance efficiency are symmetric information, simplicity, transparency, speed, and scale economies. Within the context of our framework, we define efficiency as the ability of firms to increase efficiency of their transactions and retain it across the long future.

The findings of earlier empirical studies including Amit and Zott (2001) clearly demonstrate positive role of these value creating drivers. Thus, all such value creating drivers can significantly contribute in bringing organizational efficiency and thus drive to value creation. The four supporting facets of sustainable interorganizational relationships bottom line are not intended to be entirely mutually exclusive. For instance, an organization's - campaign of improving novelty – can reduce efficiency by lowering the chances of consumer boycotts. Thus the authors advocates that all four of these supporting facets are an integrated part of sustainable interorganizational business model innovation (SIOBM) process.

5. A framework of sustainable interorganizational business model (SIOBM)

The term business model has been defined as “the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities” (Amit and Zott, 2001, p. 511). Furthermore, Zott and Amit (2007) argue that a business model 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. Business model innovation has become a recent focus as a variant of business model.

Based on a global survey, Amit and Zott (2012) reveal that more companies now are turning toward business model innovation as an alternative or complement to product or process innovation. They state business model innovation can consist of adding new activities, linking activities in novel ways or changing which party performs an activity. Thus it gives a clear message that firms can compete on the basis of business model, not only based on new products/technologies. Emphasizing on the role of value drivers, they argue, within organizations, business model choices often go unchallenged for a long time.

When addressing on how a company increases the likelihoods of developing the right business model, Amit and Zott (2001) identified four major interlinked value drivers of business models: novelty, lock-in, complementarities and efficiency. We have adapted these four drivers and pursued them as important facets of the sustainable interorganizational business model innovation. Thus, this paper builds on Amit and Zott (2001) and extends their work by linking the value drivers with the elements representing organizational sustainability. Similarly, Sommer (2012) emphasizes that a business model does not only focus on company, but also involves a wider set of stakeholders, necessitating a broader value-network perspective for innovating and transforming the business model. In the same vein, Zott *et al.* (2011) state, business model extends beyond the entity of the firm, its customers and shareholders, and also includes value captured for key stakeholders such as suppliers.

Based on these prominent and complementary viewpoints of business model innovation and our review of the sustainability literature, we define SIOBM as the strategic, transparent

integration and achievement of an organization's cooperative, environmental, social, and economic goals in the system coordination of key interorganizational value drivers for improving the long term economic performance of the business model that the individual organization employs. This definition of SIOBM, which is based on the sustainable interorganizational relationships bottom line and the four supporting facets of sustainability reviewed above - novelty, lock-in, complementarities and efficiency - conceptualized and shown in Figure 2.

The cooperative, environmental and social dimensions of SIOBM shown in Figure 2 should have undertaken with a clear and explicit recognition of the economic goals of the organization, but this is not the case here so we advocate that such undertaking would be socially irresponsible unless considered within the broader context of an organization's overall strategic and financial objectives, in the same vein as Porter and Cramer (2002). For this reason, we have placed question marks around the term 'good' in the left portion of Figure 2. These question marks actually complement the perspective undertaken by some scholars, such as, Walley and Whitehead (1994, p. 46) state "responding to environmental challenges has always been a costly and complicated propositions for managers.....win-win situations.....are very rare and will likely be overshadowed by the total cost of a company's environmental programme." They, however, focus on cost of the compliance with reactive government regulation, which can indeed result in augmented costs for running business (Porter and van der Linde, 1995).

Clarke (1994, p. 37) responding to Walley and Whitehead (1994) notes, "a broader approach is necessary, one that focuses on basic changes in products, services, and business strategies that offer opportunity financially as well as economically." In addition, win-win situations

will increasingly arise as novel ideas inevitably increase and as greater complementarities allows stakeholders to see further along an organization's network.

Implementation of sustainability in business model is not an easy task, it has to face several challenges. There are three major possible ways to counter the challenges. The first is to give up traditional ways to stick with easy solution and take a bold step by making huge investment as Gray (1994) notes, some organizations have exhausted the easy measures and initiated with the harder and longer term investment commitments in which conventional and environmental criteria are not necessarily in harmony. Despite, organizations will likely become increasingly viable as the need of business model innovation continue to rise, pressures from consumer groups surge due to greater potentials of complementarities and lock-in along networks, and organizations begin to take more holistic view of the cost and benefits of the projects that are viable from social and environmental perspectives.

The second is to stay satisfied in status-quo as Hoffman and Bazerman (2005) state this as a fixed pie that cannot be enlarged. We instead offer an alternative to this fixed pie perspective, in which there are a variety of cooperative, social and environmental issues that an organization can undertake which can both improve as well as harm the economic bottom line. Cooperative, social and environmental activities which can harm or at least not help the economic bottom line are represented by the overlapping areas denoted by "good" in the left side from the center in Figure 2, which do not overlap with economic performance.

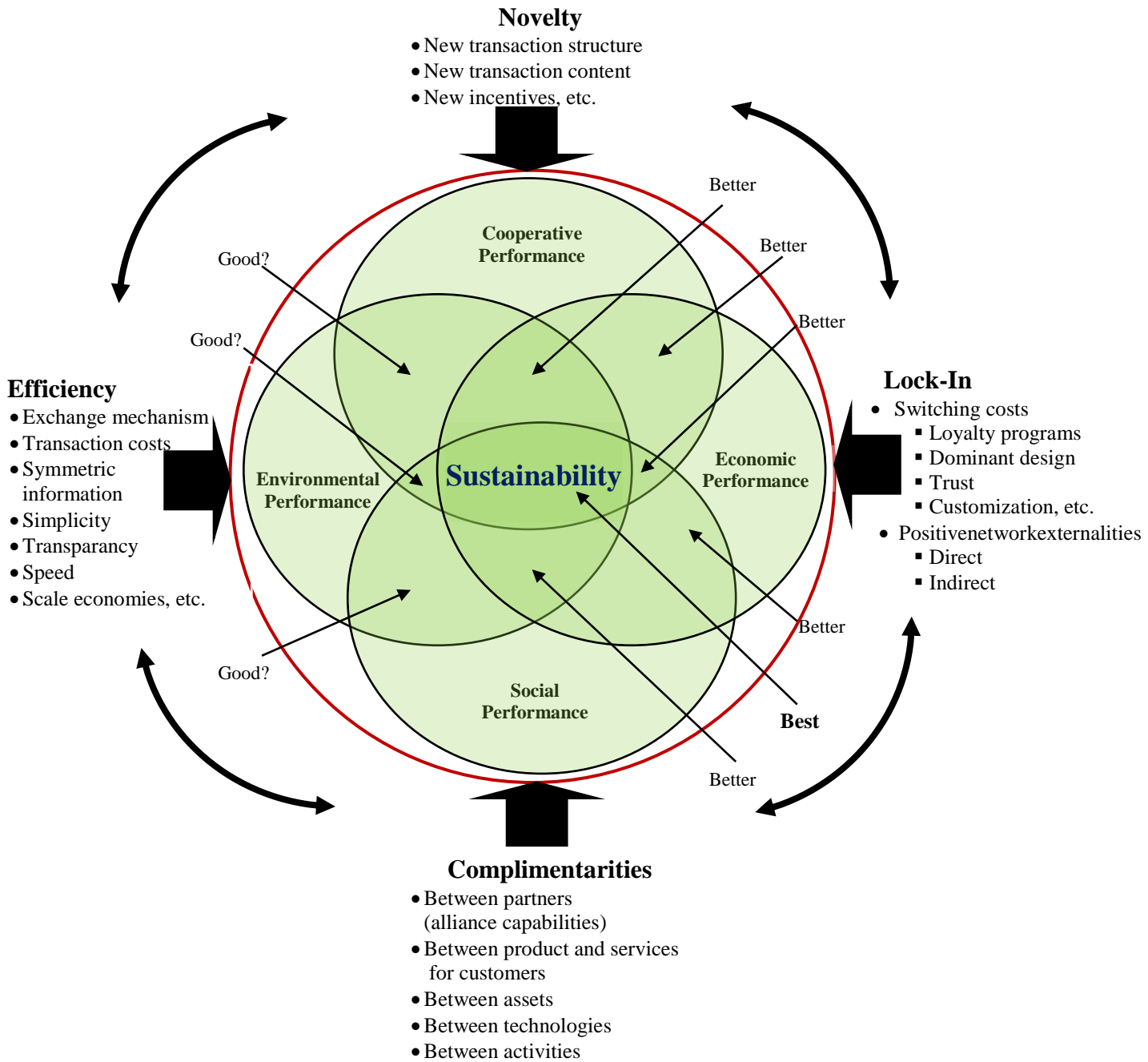


Figure 2. Sustainable interorganizational business model framework

Similarly, the third is to agree that some individual initiatives either bundled with cooperative, environmental and social initiatives, or bundled with environment, social and economic

initiatives (i.e., overlapping areas denoted by "better" in Figure 2) of course, fail, as do marketing, research and development, new product development, and numerous other conventional business initiatives. In such a context, it would be promising to learn from these failures and develop workarounds for the most common failures. For example, misunderstanding the marketplace and incorrectly expecting a price premium can be partially tackled by placing real numbers on a number of lock-in devices such as customer loyalty programs, dominant designs, customization and etc. This idea is consistent with Etsy and Winston (2006), where they suggest use of intangibles like customer loyalty and selling green and social attributes as tertiary to quality and cost can partially mitigate market misunderstanding and price premium differences.

On the contrary, there are cooperative, environmental and social interorganizational activities that lie at the intersection with the economic bottom line - these are activities that are defined as **sustainable**. Potential economic advantages (intersections of economic with cooperative and/or environmental or social in Figure 2) include increased efficiency, novelty, lock-in, and complementarities. This argument is in line with Mollenkopf *et al.* (2005), they state, reduction in packaging waste can save cost; Shrivastava (1995), he states, the ability to design for reuse and disassembly can reduce production cost; Carter *et al.* (2007), they state, better working conditions can reduce recruitment and labor turnover costs; Carter and Dresner (2001), they state, companies that proactively address environmental and social concerns can influence government regulation when this regulation is modeled after a company's existing production and network processes, leading to a difficult-to-replicate competitive advantage for companies and their suppliers; Hanson *et al.* (2004), they state implementation of ISO 14000 standards can reduce costs, make lead time shorter and improve product quality; and

Ellen *et al.* (2006), they state, engaging in sustainable behavior can make an organization more attractive to suppliers and customers.

Our contention is that the proportion of cooperative, environmental and social initiatives which result in enhanced economic performance is relatively large, as illustrated by the extent of overlap between cooperative, environmental, social and economic performance shown in Figure 2. Although most of the above outcomes are 'good' examples of ways in which an organization can improve its sustainability, true sustainability occurs at the intersection of all four areas - cooperative, environmental, social and economic - and includes multiple activities where an organization comprehensively incorporates cooperative, environmental, social and economic goals in developing strategic vision and long term strategic objectives. Furthermore, as indicated in our review of business model literature, the cooperative, environmental, and social aspects of sustainability can extend beyond an organization's boundary to include value driving business model activities. When coupled with economic activities to develop a clear, long term strategy, the inclusion of value driving business model activities in an organization's sustainability can actually create a longer lasting, and less imitable set of processes.

The preceding discussion of the advantages of such an explicit and long-term viewpoint and integration of all four of the dimensions which make up SIOBM leads to the following proposition:

P1. Organizations that strategically undertake SIOBM will achieve higher economic performance than organizations that pursue only one or two or three components of the sustainable interorganizational relationships bottom line.

However, *PI* might appear tautological; it advocates that the highest level of economic performance will occur at the intersection of the cooperative, environmental, social, and economic performance as shown in Figure 2. Thus, organizations which attempt to simultaneously maximize performance of all four dimensions of the sustainable interorganizational relationships bottom line will outperform organizations that attempt to only maximize economic performance, or organizations that attempt to achieve high level of cooperative, environmental and social performance without explicit consideration of economic performance.

6. Theory Development and research propositions

In following the call of Zott *et al.* (2011) and Schneider and Spieth (2013) for the development and creation of theory in business model innovation, we develop a broader theoretical framework within which to position our above conceptualization of SIOBM. We do so by integrating four distinct but complementary theories – relational contracting theory, transaction cost economics, resource dependency theory, and resource-based view of the firm – in order to advance research propositions which might begin to guide future inquiry in this area. We chose these four perspectives to support our framework of SIOBM because each theoretical foundation is derived from divergent disciplines: relational contracting theory from sociology, resource dependency theory from sociology and political science, transaction costs economics from economics, and the resource-based theory from strategic management. The rationale to choose these theories is due to their unique perspectives and their offerings of complementary explanations on SIOBM, as we will show next.

Relational contracting theory advocates that the behavioral norms play an important role when determining the effectiveness of governance mechanisms (Macneil, 1980). As such, this theory is firmly backed by economic and sociological perspectives, where economic perspective emphasizes rational gains (Axelrod and Hamilton, 1981), and sociological perspectives emphasize relational norms generated in a historical and social context in which transaction takes place between highly committed exchange partners (Uzzi, 1997). This means that both the rational gains and relational norms constitute relational resources that constrain the business models. Business models that are unable to accommodate these relational resources disappear and others survive and that in order to survive, business models must accommodate relational resources. Resource dependency theory also proposes that the success and survival of an organization is possible by securing maximum power through the acquisition of scarce and valuable resources (Pfeffer and Salancik, 1978; Pfeffer, 1981), in a stable and low-cost manner. Similarly, transaction cost economics suggests that firms attempt to acquire resources in a low-cost and stable manner (Williamson, 1975). Pfeffer, Salancik, and Williamson argue that as dependence on resources increases, firms should attempt to increase vertical coordination. This understanding leads to the following proposition *P2a*, which posits that resource dependency is positively associated to vertical coordination. As business models become increasingly dependent on scarce and valued resources, there will be a need to increase coordination with the exchange partners. Such coordination, for instance, may be in terms of acquiring access to strategic supplier technologies and knowledge by forming supplier partnerships and strategic alliances (Arminas, 2004) or in other firms.

P2a. Business models that are dependent upon key, external resources can improve their economic sustainability through vertical coordination.

The relationship as mentioned in *P2a* becomes even more important in the face of uncertainty. Thompson (1967) and Pfeffer and Salancik (1978) argue that resource dependency of a focal organization is characterized by the environment in terms of other organizations with which it engages in exchange relationships. Most organizations survival depends on the resources they trade with their exchange partners, and quite often they make the necessary accommodations to guarantee exchange relationships with other organizations. Therefore, change in organizational structure or behavior may reflect accommodations intended to secure a stable flow of resources from the environment (Oliver, 1990). Uncertainty occurs due to either the unpredictability of contingencies ex-ante in a contract or ambiguities experienced ex-post while evaluating performance (Alchian and Demsetz, 1972). Exchanges are contingent upon information availability. The higher the level of uncertainty, the lower the amount of information is available. In fact, more information surrounding transaction increases the possibility of occurring transaction. Some transactions might have benefits and risks along with the long time horizon, but it is difficult to anticipate all risks and benefits before entering into coordination. Thus, uncertainty leads to exchanges that are more conducive to opportunism and thus organizations are more likely to vertically integrate or more vertically coordinate in the event of uncertainty (Walker and Weber, 1984; Williamson, 1979, 1985, 2008). Therefore, business models being the value creating mechanism of the organizations proposition *P2b* can be formulated as:

P2b. Business models that face uncertainty regarding key, external resources can improve their economic sustainability through vertical coordination.

Another important issue that remained uncaptured in the above propositions is the likely interaction effect between resource dependence and the uncertainty. We argue, if a business model is highly dependent upon a resource or capability and faces uncertainty surrounding the acquisition of that resource, this situation forces organization to choose even stronger governance mechanism (i.e., vertical integration) than if either of the external conditions of uncertainty or resource dependence existed without the other. Transaction cost economics bases on economic efficiency that determines how exchanges should be performed. Thus, this theory attempts to explain how economic actors enable cooperation in order to reduce potential conflicts attributed with uncertainty and realize mutual gains (Williamson, 1985). Similarly, the resource-based view having its focus on strategic management and theory of competitive advantage presents, and predicts how firms attain a sustainable competitive advantage by organizing a bundle of heterogeneous resources (Warnerfelt, 1984; Barney, 1991; Grant, 1991; Peteraf, 1993). This means, business models which are dependent upon key resources and capabilities, and face uncertainty of these resources and capabilities should increase vertical coordination to an even greater extent than business models that only face uncertainty or only face resource dependence.

Therefore, we propose proposition *P2c* as follows:

P2c. There is a positive relationship between vertical coordination and the interaction of uncertainty and resource dependence.

These propositions may at the surface seem underdeveloped, however they initiate guiding for how organizations can structure business models to achieve economic sustainability and follow the calls in the extant literature for theory development in business models (Zott *et al.*,

2011; Schneider and Spieth, 2013). Furthermore, these propositions, while perhaps seemingly generic, apply to our framework of SIOBM (Figure 2) concerning value drivers: novelty, efficiency, complementarities, and lock-in. In the short term, for commodity-like products, a business model might efficiently utilize novel ideas by offering a bundle of complementary products in collaboration with other partners, for instance, future markets as an attempt to coordinate with supply sources to minimize uncertainty. Autobytel.com revolutionized the automobile-retailing process in the United States through linking potential buyers, auto dealers, finance companies, and insurance companies, thus enabling round the clock one-stop car shopping from home (Amit and Zott, 2001: 508).

Organizations will likely need to adopt even longer-term and more flexible business models to ensure their long-term viability. Amit and Zott (2001) suggest that the value is created by the way in which transactions are enabled. Taking a context of e-businesses they state, transactions are enabled through a network of multiple stakeholders including suppliers, customers, and complementors. In line with this, we content that a business model spanning industry and firm boundaries advocates increasing access to scarce resources, which could potentially be a solution to ensuring sustainability. Vertically integrated and closed loop supply chain as presented by General Mills (2006) and Carter *et al.* (1998) ensuring a consistent supply of recycled materials has been an excellent initial step for sustainability as these reduce cost of packaging materials and thus in the long run there seems possibilities to develop even more sustainable materials and processes.

Resource-based view suggests that a firm may achieve economic stability by effectively employing its resources (Warnerfelt, 1984; Barney, 1991; Grant, 1991; Peteraf, 1993). Garvin

(1993) states knowledge as a resource, which include the ability of organizations to effectively learn and to implement changes based on what they have learned. Such knowledge consists of experience, social relationships, and the insight of managers and workers of an organization (Barney, 1991). Some researchers (e.g., Slatter and Narver, 1995; Moorman and Miner, 1997) have shown that focus on marketing can lead to competitive advantage. The resource and knowledge-based view can be expanded to the resources of a relationship network (Gulati, 1999). When we think of business models, they are quite often external to an organization and they are in many ways less transparent and more difficult to imitate. For example, in the product world, Gillete uses its pricing strategy of selling inexpensive razors to make customers buy its more expensive blades (Amit and Zott, 2012). A business model lays the foundations for the organizations value capture by co defining (i.e., based on product and service) the total value that is created, which can be considered an upper limit to the organization's value capture (Brandenburger and Stuart, 1996). The greater the total value created through the innovative business model and the greater an organization's bargaining power, the greater the amount of value that the company can appropriate (Zott and Amit, 2007). Organizations share rich information and develop higher level of trust with the 'embedded ties' (Gulati, 1999). In line with these arguments, we contend that a business model integrating cooperative, social, and environmental resources may also be more difficult to replicate, particularly if suppliers devote specific investment to engage in the design for disassembly and reuse activities of their customers. Thus this leads to the proposition *P3* as follows,

P3. Business models that integrate cooperative, environmental, and social resources and knowledge may be more difficult to imitate, thus leading to economic sustainability.

Transaction costs include both the direct costs of managing relationships and potential opportunity costs of making weaker governance decisions (Williamson, 1975, 1985, 1996). The two underlying assumption of TCE namely bounded rationality and opportunistic behavior pose challenges when it comes to control transaction costs. Bounded rationality limits an organization in terms of communication, information processing, and cognitive capabilities in the presence of external uncertainty. Similarly, opportunistic behavior restricts to see the interest of exchange partners. In order to get hold of these situations organizations need to incur high monitoring costs as Stump and Heide (1996) posit that it is always costly to monitor the threat of opportunistic behavior in an interorganizational relationship. Therefore, a trade-off between stronger incentives and reduced opportunism needs to be considered when deciding on governance (Williamson, 1991). Relational exchanges (i.e., hybrid contracting) can safeguard organizations that are more prone to opportunism (Williamson 2008). Relational norms (e.g., solidarity, flexibility, and so on) are important and useful in cooperative relationships (Heide and John, 1992; Poppo and Zenger, 2002) as they can discourage opportunistic behavior of the counterpart. Dyer and Singh (1998) have tested relational contracting as a governance mechanism and found that the relational contracts govern original equipment manufacturer (OEM) supplier relationships. They not only proved relational contracts as an important governance in the OEM industry but also showed its governance potential in several other firms. Thus, it leads the following proposition from the standpoint of sustainability:

P4. To the extent that a business model can eliminate opportunistic behavior (improve cooperative and social sustainability) in its interfirm relationship, this should lower the cost of business model, thus improving the economic component of sustainability.

7. Summary and conclusion

The conceptual framework and propositions developed in this paper begin to meet the call for more theory building research in business model innovation (Zott *et al.*, 2011; Schneider and Spieth, 2013), which can, "lead to a better balance between theory-building and theory testing," in a scientific discipline (Meredith, 1993, p. 4). The paper's theoretical framework attempts to meet the criteria of a good theory defined by Weick (1989, p. 517) as, "a plausible theory (which is) judged to be more plausible and of higher quality if it is.... obvious in novel ways.... high in narrative quality," circumstances which are more likely when explicit research questions, for instance those stated in the paper's introduction, are stated in advance.

The framework developed in this paper meets many of the components of a theory. For instance, definitions of key concepts and posited relationships among those concepts and framework derived through conceptual theory building (Weick, 1989; Meredith, 1993). We hope that our research will stimulate additional theory-building and conceptual development within business model innovation discipline. Given the early development of the SIOBM framework, the propositions should be considered very tentative, and should be subjected to further refinement through both quantitative and qualitative research endeavors. One of the possible research endeavors would be to use a multiple case study methodology to test the conceptual framework and propositions. The other possibility would be to use grounded theory approach (Glaser and Strauss, 1967) to further develop the SIOBM framework. Similarly, an ethnographic inquiry via full time, on-site participation and observation of an organization and its business model (Hammersley and Atkinson, 1995) can enhance even deeper understanding of the beliefs and motivations of organizations' engagement in SIOBM. This approach can allow researchers to take an experiential focus into organizational

(Hargadon and Sutton, 1997) and potentially interorganizational phenomena. Further, business model researchers might employ such an ethnography methodology to examine the supporting role of value drivers (i.e., novelty, efficiency, complementarities, and lock-in) in SIOBM, as well as the interrelationships among the elements of value drivers.

Additionally, to assess the long-term performance (*PI*), a longitudinal analysis will be quite interesting. Such an analysis might use a survey-based methodology to measure the level of organization's cooperative, social, and environmental business model performance over time (Johnson *et al.*, 2006), combined with the multi-year financial measures (Wiggins and Ruefli, 2005). Such an analysis would need to measure actual performance (e.g., effect of interorganizational cooperation, or public awareness campaign or reduction in carbon emission) as opposed to activities (e.g., the use of alternative relationship governance mechanism, or the use of alternative fuel or volunteers hours spent performing awareness campaign). A longitudinal analysis might also provide a basis for the identification of common stages of SIOBM evolution and implementation, perhaps via an in-depth case study design.

After further developing and refining the SIOBM framework, a logical step would be to develop scales to measure the sustainable interorganizational relationships bottom line, the supporting facets of SIOBM, and the relationships among resource dependency, environmental uncertainty, vertical coordination, imitability and business model resiliency (*P2a - P4*). Potential starting point to measure these variables would be to get initial idea from the extant literatures in nearest disciplines. For instance, Murphy and Poist (2002) can give an initial impression on the likely measures for the elements of interorganizational relationships bottom line, Hult *et.al.* (2006) can help to develop measures for business model resources and

knowledge (P3), and Steensma and Corley (2000) can give some idea to develop the measures for business model imitability. Similarly, opportunistic behavior of the exchange partners can be measured by the scale found in the marketing channels (Morgan and Hunt, 1994). Measures for the remaining facets of SIOBM would be developed by incorporating rigorous process including interviews with executives, and a review of the trade press (Churchill, 1979; Flynn *et al.*, 1990).

Our framework provides a starting point for a common understanding of SIOBM among chief executive officers (CEO). However, many CEOs have already been familiar with the term sustainability and its implication, this paper creates interest to them as it offers broader understanding of the sustainability in an interorganizational context of the business model innovation beyond the conventional understanding of the influence of environmental and social responsibility of the organizations. Specifically, the CEOs who are dreaming of accumulating long-term success of their business models in the modern complex networked business operations, this paper provides some elementary insights that might lead their idea generation processes towards the success and prosperity of the organization they are responsible for. Our hope is that future researches could develop business cases incorporating SIOBM framework and propositions, which will lead to enhance acceptance and adoption of SIOBM in practice.

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Drawing on literature on business model innovations and sustainability, this paper develops a framework for sustainable interorganizational business models. The aim of the framework is to enhance the sustainability of firms' business models by enabling firms to create future value by taking into account environmental, social and economic factors. The paper discusses two themes: (1) application of the term sustainability to business model innovation, and (2) implications of integrating sustainability into business model innovations for long-term economic success.

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