Business model dynamics and innovation: (re)establishing the missing linkages

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Abstract

Purpose – This paper aims to discuss the need to dynamize the existing conceptualization of business model, and proposes a new typology to distinguish different types of business model change.

Design/methodology/approach – The paper integrates basic insights of innovation, business process and routine research into the concept of business model. The main focus of the paper is on strategic and terminological issues.

Findings – The paper offers a new, process-based conceptualization of business model, which recognizes and integrates the role of individual agency. Based on this, it distinguishes and specifies four different types of business model change: business model creation, extension, revision, and termination. Each type of business model change is associated with specific challenges.

Practical implications – The proposed typology can serve as a basis for developing a management tool to evaluate the impact of specific changes to a firm's business model. Such a tool would be particularly useful in identifying path dependencies and resistance at the process level, and would therefore allow a firm's management to take focused action on this in advance.

Originality/value – The paper makes two main contributions: first, it offers a new, process-based conceptualization of business models; second, it is the first paper to establish a direct link between business model change and the degree of innovation (such as "incremental" vs "radical"), and which distinguishes and specifies different types of business model change.

Keywords Business model, Business processes, Change management, Innovation, Strategic maneuvering, Individual agency

Paper type Conceptual paper

1. Introduction

In recent years, the term business model has been used in the literature in various contexts and with different meanings (Ghaziani and Ventresca, 2005). In management literature, business models have attracted increasing interest since the end of the 1990s (Osterwalder *et al.*, 2005), in particular in relation to the transition from traditional commercial activities to e-commerce (see, for example, Chen and Ching, 2002; Mahadevan, 2000). More recently, business models have been broadened and discussed in relation to, for example, material efficiency services (Halme *et al.*, 2007), innovation in the healthcare sector (Hwang and Christensen, 2008), mobile (m)-services (Eriksson *et al.*, 2008; Jørgensen and Ulhøi, 2010; MacInnes *et al.*, 2002), small and medium-sized high-tech enterprises (Mets, 2009), strategy formulation and execution, and the creation and renewal of business in general (Johnson *et al.*, 2008; Miles *et al.*, 2006; Morris *et al.*, 2005).

An earlier version of this paper was presented at the AoM meeting in Montreal, August 2010. The authors would like to thank the reviewers from the Entrepreneurship Division and the audience for constructive and helpful comments. The usual disclaimers apply.

Management Decision
Vol. 49 No. 8, 2011
pp. 1327-1342

0025-1747
DOI 10.1108/00251741111163142

We posit that a firm's business model serves two interlinked purposes: to provide some stability for the development of a company's activities and, at the same time, to be flexible enough to allow for change. Managers might fail to recognize, explore, seize and exploit valuable new technological and/or market opportunities in time, since this may require commercial approaches that are not consistent with the present business model. The key questions, therefore, remain: Is there a way to (re)establish the critical linkages between the stabilizing forces of a business model and the inherent dynamics associated with technology and market discontinuities? And, if yes, what would a strategic framework that allows for identifying distinct types of change in a business model look like? These are the questions that have guided this research.

The business model has been conceptualized as a key activity system and entrepreneurial task (Zott and Amit, 2010). Some have described the development of general purpose technology as a novel business model design, while others stress the need for business model innovation (Chesbrough, 2010). These ideas, among others, have just been published in a Special Issue on business models in long range planning, addressing definitions of business models, how they emerge, and how to implement them. In this paper, we take a different approach. We conceptualize a business model as a systematic analytical device, partly for evaluation and action (Doganova and Eyquem-Renault, 2009) with respect to organizational change in general, and partly for addressing innovation (Demil and Lecocq, 2010) activities in particular. The paper makes two main contributions to the field: First, the strategic approach adopted in this paper recognizes and integrates the role of individual agency and identifies four distinct types of business model change. Second, the reconceptualized framework establishes a direct link between business model change and the degree of innovation (such as "incremental" vs "radical").

The remainder of the paper is organized as follows. First, we take a starting point in the theoretical meaning of the term business model by introducing the concept as an abstraction of a company's core repeated standard processes, and explain the reasons for adopting this perspective. Next, we distinguish between four different types of business model change:

(1) business model creation;
(2) business model extension;
(3) business model revision; and
(4) business model termination.

The following discussion addresses three key issues: the challenge of identifying the various types of business model change in practice; companies' tendency to avoid business model revision and to preserve the status quo; and the role played by individuals in the dynamics of a business model. The final section briefly sketches avenues for future research and managerial implications.

2. A dynamic perspective of the business model concept

According to Osterwalder *et al.* (2005), a business model is a "blueprint" for how to run a business. This correctly expresses the notion that a model is an abstraction that describes a business not at the operational level, but at the conceptual level. In this paper, we introduce the idea of a business model as an abstraction of the principles supporting the development of the core repeated standard processes necessary for a company to perform its business.

By arguing that a business model is an abstraction, we are emphasizing the role of cognition. We posit that individuals' cognition – and consequently their interpretation of events (Kirzner, 1997, 1999; Yu, 2001) – strongly influences the creation and development of organizational processes and plays a central role in the dynamics of a business model. There is ample evidence in the management literature of the importance of individuals for organizational change: managers' influence on product innovation (Howell *et al.*, 2005; Smith, 2007); employees' importance for the continuous adjustment of organizational routines (Feldman, 2000, 2003); the link between organizational routines and learning (Bresnen *et al.*, 2005) and conscious knowledge efforts (Swift and Hwang, 2008); the effect of managerial cognition on organizational change (Tripsas and Gavetti, 2000); and business models based on cognitive mechanisms (Tikkanen *et al.*, 2005) and mind-sets (Linder and Cantrell, 2002).

Here, core repeated standard processes refer to a set of related activities repeatedly carried out to meet a priori specified goals. In addition to different definitions, however, scholars have also used different terminologies to refer to the concept of organizational processes. Cyert and March (1963), for example, suggested that firms are governed by standard operating procedures/rules. Decades later, Nelson and Winter (1982) developed the idea of firms as consisting of a set of routines – routines which, include "(. . .) most of what is *regular* and *predictable* about business behaviour (. . .)" (p. 15, original italics). The late 1980s and 1990s saw the emergence of research in business process management and its effect on the optimization and efficiency of processes (Andersson *et al.*, 2005; Caverlee *et al.*, 2007). This became a major trend in organizations, which massively adopted methods such as total quality management (TQM) and business process reengineering – BPR (Davenport and Stoddard, 1994; Hammer, 1990).

Applying a process-based perspective to the business model implies that a strategic abstraction of processes is needed, i.e.:

- not all processes are equally relevant, only core standard repeated processes – those that are of key importance to the business and performed on a continuous basis;
- it is not necessary to describe the operationalization of the processes in detail (a common practice in methods such as TQM and BPR); and
- in addition to current core processes, non-existing processes also deserve attention, since this is where much of the greatest potential often lies (Mitchell and Coles, 2004).

Examples which further illustrate the idea of abstracting core repeated standard processes of firms include Southwest Airlines, which often offers high-frequency direct flights to customers; the company's airplanes operate only from the uncongested airports of small cities; the company charges low fares and does not sell tickets through travel agencies (Morris *et al.*, 2005; Teece, 2010). Dove Data Products repeatedly sells a narrow line of standardized products (only photocopy and computer storage items) using direct distribution through local offices, while Operations Associates exclusively sells a highly customized narrow range of services (such as information technology and financial services) through direct offers (Morris *et al.*, 2006).

Although the literature on business models has little to say about what the core repeated standard processes of a business model really consist of (since this is an aspect of business models under development), the prolonged debate on the constituent components of a business model (Osterwalder *et al.*, 2005; Morris *et al.*, 2006; Johnson *et al.*, 2008) indirectly helps to determine which core organizational processes deserve particular attention. However, two important aspects call for further consideration. First, in our view, the core components of a business model depend on both individual cognition and the specific characteristics and necessities of a company, and thus differ from business to business. Baron and Hannan (2002), for example, emphasize that one of the most intriguing findings of their research is the different mental models of entrepreneurs regarding the best organizational form for high-tech new ventures in similar circumstances. Tripsas and Gavetti (2000) have described how the strong beliefs of top management at Polaroid have long influenced the way the company does business. Thus, an identification of core components presumes a thorough understanding of what the company's business is really about, i.e. its real purpose. It is not only the core components of a company that depend on the cognitive abilities of its employees, but also how they are coordinated and configured. Second, the identification of core components should be driven by the view that organizational processes are central to a business. If a core component cannot be described in terms of its underlying processes, then it should not be part of the business model of the firm in question. The main reason for this is that it is important to identify those critical mechanisms, which make it possible to change the business model (otherwise the result would just be a snapshot - a static representation of the business model in question).

The identification of the boundaries of a business model thus remains of fundamental importance, since these can be used as strategic parameters for identifying the impact of change initiatives. We propose that the core repeated standard processes of a company's business model should constitute its boundaries. Changes in core repeated standard processes therefore imply a change in the business model.

Having explained our view of the business model, we now address the ways in which a business model can be changed according to this perspective.

3. Business model change

The process of implementing organizational change is often fraught with difficulties (Barr *et al.*, 1992; Kotter, 1995; March, 1981; Tripsas and Gavetti, 2000). Not all changes lead to a change in the business model, however. If this were the case, then the business model concept would lose its model properties. Only changes that affect the core standard repeated processes of a business model constitute a change in the business model. If we accept this, then non-fundamental changes remain outside the scope of this paper.

Here, we suggest four different types of business model change:

(1) creation;

(2) extension;

(3) revision; and

(4) termination.

Each type of change involves specific challenges and difficulties. These different types of business model change are illustrated in Figure 1. The distinction is rooted in the association of business models with core standard repeated processes. In the following sections, we will address each of these types in more detail.

3.1 Business model creation

This category refers to the transition from "business ideas" to block I in Figure 1, and thus to the materialization of a business idea into a new venture, i.e. getting a new business model up and running. The initial idea for a business model resides in the mind of the entrepreneurial agent, and it will often undergo several modifications before being put into practice. In such situations there are no relevant previous working practices or repeated standardized processes to draw on prior to implementation of the business model. Critical processes related to future customers, suppliers, partners and competitors, etc, are still just ideas or hypotheses (Harper, 1996) of the emerging business model. Moreover, at the idea stage, entrepreneurial agents start from a more or less vague cognitive map or "picture" of the key processes that will eventually support the development and gradually standardization of the company's activities. Entrepreneurial agents may face many obstacles, including uncertainty and ambiguity in defining a viable business model (Andries and Debackere, 2006), lack of knowledge about different challenges in areas such as law, technology, marketing and finance (which in most cases is essential for starting a business), difficulties in attracting sufficient financial capital for the new venture (as well as attracting and

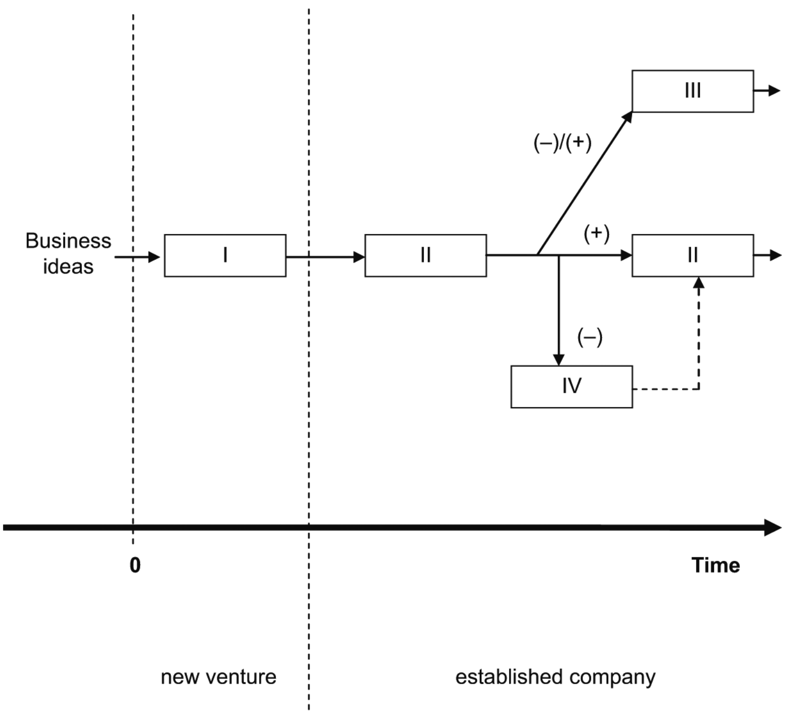

Figure 1.
Business model change

cultivating the necessary human capital to support future growth), and difficulties related to professionalizing the administrative processes during initial growth.

The main change in connection with business model creation takes place when the idea/vision comes into practice and the initial processes for running the business are implemented. During the early stage of creation, various adjustments are necessary to fit the new venture into its relevant business environment. One example of a firm during its early development is Naturhouse, which, from 1992 to 1996, had to deal with a number of problems prior to growth taking off. In their study, Sosna *et al.* (2010) found that the company had had many problems, including supply problems (the company's line of products and services was too broad), a lack of customers where the company was first established, stores that were too large, and difficulties such as losing all the company's stock in a flood, and domestic economic recession.

There are several challenges during the initial stage of a new business model, including: the need for products to be accepted by customers and succeed in a market that is profitable enough to guarantee survival; the need to improve the technological and commercial competencies in connection with the products offered; the need to develop an organizational structure to coordinate the company's activities; the need to sustain a high level of enthusiasm and confidence about the business idea (Davidson and Klofsten, 2003). A critical issue remains, however: how to achieve the right balance between flexibility and persistence, since uncertainty about the success of the initiative can endure for months, perhaps even years.

3.2 Business model extension

Basically, by extension is meant adding activities and/or expanding existing core processes to an existing business model. In Figure 1, this is illustrated by the transition from one block II to the other block II. The main characteristic in this phase is the addition of activities, which is illustrated in Figure 1 by the sign (+) between the two blocks. A key motivational driver for extension is to explore opportunities for enlarging the existing business and to exploit associated commercial opportunities. At this stage, companies have already defined their core repeated standard processes. Over time, individuals (both employees and managers) become more skilful and familiar with the procedures related to the execution of their tasks. Extending a business model may involve operating over a wider area. After a difficult period, for example, Naturhouse established 40 new stores and consolidated its new business model during the course of a single year (Sosna *et al.*, 2010). The firm decided to focus on customized nutrition counseling and product sales, including a high level of privacy and personal relationships with clients. Extending the business model may also involve initiatives such as offering more and/or better lines of products/services, which can occur gradually over the years.

Extending a business model does not follow a pre-established pattern or track. Mangematin *et al.* (2003) note that even in a uniform population of firms – such as biotech small and medium-sized enterprises (SMEs) – the logic of the development of firms differs for each business model. In contrast to changes in the creation phase (when the business model is still only an idea), the business model extension phase involves changes in working practices. Previous working experiences can therefore be used as a useful frame of reference for dealing with emerging difficulties, including: difficulties in attracting additional capital to finance expansion; uncertainty about whether the expected extra demand will actually materialize; challenges associated with recruiting and selecting the necessary human capital and coordinating integration between the existing and expanded activities of the company.

3.3 Business model revision

A third type of business model change is revision, which is illustrated in Figure 1 by the transition from block II to block III. By revision is meant removing something that modifies an existing business model and replacing it with a new process, which is indicated in Figure 1 by the signs (−)/(+) between blocks II and III. Revision implies intervening in existing process(es), which in turn implies following a different direction and/or exploring alternative ways of doing business. In Figure 1, the transition from block II to block III by an arrow that does not follow the expected direction indicates a change in the company's action. Revision of a business model can be due to different factors and mechanisms, including:

- new commercial opportunities requiring new ways of doing business;
- the company's business model is not effective anymore: its products and/or services do not fit customers' needs and produce suboptimal results – or, as Sosna *et al.* (2010) argue, the firm's business model faces the threat of obsolescence;
- the company's competitors are developing new processes that threaten to capture its share of market; and
- new entrant companies that have introduced completely new ways of meeting existing demands.

While creation implies the conceptualization and implementation of a new business model, and extension implies expanding the business without affecting existing processes within the business model, revision implies that existing working practices are subject to change.

With the advent of digital technology, Kodak, a maker of cameras and film, was forced to reconsider and revise the core repeated standard processes of its business model. Instead of trying to develop digital technology internally on its own, Kodak decided to acquire the necessary knowledge on digital imaging through joint ventures with other firms. However, this transition from the old to the new technology involved a number of significant challenges (Macher and Richman, 2004), since revising core repeated processes (which means revising existing working practices) is not a simple task.

Business model revision is likely to involve significantly more challenges than business model extension, because it requires more fundamental changes. Organizational inertia, i.e. forces which constrain companies' ability to make structural change in response to environment threats (Hannan and Freeman, 1984; Kelly and Amburgey, 1991), is one major difficulty. Another typical problem that prevents or postpones renewal (in time) is path-dependency. Originally introduced in evolutionary economics (Nelson and Winter, 1982), path-dependency refers to lock-in mechanisms, which, on the one hand, keep organizations on their existing (and previously successful) track, but, on the other, make it difficult for them to adopt new trajectories (Driel and Dolfsma, 2009; Liebowitz and Margolis, 1995; Sydow *et al.*, 2009). A third important challenge involves the cognitive manifestations of employees trying to make sense of change, which may be interpreted as resistance to change (Isabella, 1990). Last, but not least, problems of power and politics (Augier and March, 2008; Eisenhardt and Bourgeois, 1988) also affect established companies wanting to exploit new market opportunities that require a different approach.

Companies such as Xerox and IBM have implemented new business models without revising core repeated standardized processes. Chesbrough and Rosenbloom (2002) report that Xerox successfully explored new technologies through spin-offs, i.e. ventures selected to develop and commercialize new technologies developed in Xerox's research laboratories, while IBM created a new company (Blade.org, established in 2006) to deal with a new "blade-server"-based technology platform through which a community of member firms develop innovative solutions (Miles *et al.*, 2010). The core processes of both companies' business models, however, remained unaffected.

3.4 Business model termination

The last category of strategic business model change is business model termination, illustrated in Figure 1 by the transition from block II to block IV. Here, termination refers to abandoning/removing processes, which is why block IV is shown outside its expected trajectory. The abandoning of processes is indicated by the sign (−) between blocks II and IV. Business model termination can refer to closing down a business area or unit (assuming it has its own business model), or closing the entire company. If it decides to close down a business area or unit, which means abandoning just some of its current processes, the remaining activities of the company will continue to be developed, which is indicated in Figure 1 by the slashed arrow from block IV in the direction of block II. Some obvious difficulties that may arise during business model termination include resistance from, or indecision on the part of, some of the company's owners. Table I gives an overview of the different types of business model change and key challenges.

4. Discussion

4.1 Distinguishing between the different types of business model change

The distinction between different types of business model change is based on the process view introduced in this paper, which allows conceptualizing business model

Type of change	Characterization	Key challenges
Business model creation	Creation of new processes	Uncertainty and ambiguity (failure and inefficiency) Lack of knowledge and skills Lack of resources
Business model extension	Adding new processes	Controlled risk Some shortage of resources
Business model revision	Changing existing processes	Uncertainty and ambiguity Lack of knowledge and skills Path dependence, inertia Blinders, cognitive manifestations Resistance
Business model termination	Terminating existing processes	Resistance

Table I.
Business model change: parameters to consider based on key challenges

change with respect to the core processes involved. For analytical simplicity, we have limited the managerial choices to the following: creation, extension, revision, and termination. In practice, however, the situation is more complex, since different elements of change will often be present in a variety of different combinations, and business model extension and revision in particular often go "hand-in-hand". The main reason for this is that a business model typically consists of not only one, but a variety of different organizational key processes that can (and often will) be affected in different ways by a change initiative.

To give an example: a Danish software company wanting to realize the potential of indoor positioning for search and rescue operations started a new project involving the indoor tracking of fire fighters. From a technical point of view, this was just one more in a row of many IT projects, and thus clearly an example of business model extension. However, it turned out that this product is only profitable if marketed internationally. Since this division of the company was only present in the Danish market at the time, the introduction of the new product would require revisions necessary to internationalize sales and marketing.

As this example shows, a change initiative can lead to rather unexpected business model revisions "through the back door". To acquire a full understanding of the impact of a change initiative on an existing business model, managers therefore need to evaluate and understand its wider impact on all its different organizational core processes. For organizational core processes where the change initiative leads to mere extension, it is most likely that things will work out rather smoothly. However, for processes that have to be revised, firms are likely to be faced by the different obstacles associated with path dependence and inertia. Against this background, a main contribution of our framework is to improve the understanding of the impact of change initiatives on business models. A change initiative is not disruptive or incremental per se, it is not even more or less disruptive *per se*, but it is more or less disruptive with respect to specific organizational core processes. This insight is of immense importance to firms dealing with change initiatives, since it enables them to address the obstacles to change in a much more specific way, and to localize and specifically address path dependence and inertia on the one hand and uncertainty on the other at the process level.

4.2 Companies tend to avoid major business model revisions

Christensen (1997) has found that the focus on current profitable customers inhibits the exploration of emergent technologies in new commercial segments; in consequence, new business opportunities have often not been realized by incumbents, but by new ventures. Managers tend to avoid radical change and leave their "comfort zone", since such changes would require them to question their mental models (Markides, 1997) and the "dominant logic" (Prahalad, 2004) established and matured in previous procedures and principles. Charitou and Markides (2003) have presented some compelling arguments as to why managers do not welcome radical change. All these explanations center on the persistence of existing processes, so that these insights mostly apply to business model revision and termination, and less to business model creation and extension. Therefore, we suggest associating business model revision with what has been called in the literature "radical" or "disruptive" innovation (McDermott and O'Connor, 2002).

However, taking into account the fact that business model change takes place at the process level, our framework distinguishes between two different forms of avoidance.

On the one hand, change initiatives can be rejected from the outset, as usually suggested in the literature. On the other hand, they can be adapted to existing business models in such a way that new processes are implemented, but only insofar as they do not lead to major revisions of the existing models. In this case, new opportunities may indeed lead to change, but only to an insufficient extent, so that the greater potential of new opportunities is far from being fully realized. One well-known example of this is the missed opportunities of the internet by large book sellers (Dillons, Waterstones, Bertelsmann and others) prior to the appearance of Amazon in the 1990s. Although these companies did carry out some activities on the internet, they avoided making necessary fundamental revisions in marketing and sales: the new opportunity, "the internet", was adapted to the old business model, "bricks-and-mortar bookstore", not the other way around. Notwithstanding, some companies have succeeded in making major revisions of their business model (Macher and Richman, 2004), such as IBM (founded in 1911), Hewlett-Packard (founded in 1935) and Nokia (which started out as a paper mill in 1865). Although radical change is recognizably more difficult and stressful, we should recall the point made decades ago by Joseph Schumpeter regarding the role of the entrepreneur in promoting "new combinations" which trigger economic development, and which in turn may lead to episodic instances of "creative destruction" (Schumpeter, 1942).

4.3 Individuals and business model dynamics

The role of individuals in organizational change, which is central to our view of business model dynamics, has recently been recognized by different streams of research. This can be seen from the literature on innovation (Howell *et al.*, 2005; Smith, 2007), routines (Bresnen *et al.*, 2005; Feldman, 2000, 2003), dynamic capabilities (Swift and Hwang, 2008), and business models (Linder and Cantrell, 2002; Tikkanen *et al.*, 2005). In its essence, business model dynamics is driven by an individual's ability to recognize the need for change and by the will to promote and implement such change. Individuals' cognition and actions are involved from the very beginning of such a process, where there exists only a vague idea/vision of a business plan for exploiting a commercial opportunity, right up to the end, when a business is terminated.

The founders of a new venture passionately believe in the potential of their business idea, visualize what the business model of their future company will look like, plan the actions needed to start a new venture, and realize their vision in the shape of establishing a new company. They have to decide how to organize their business, i.e. to configure all the necessary business processes (how production and sales will take place, for example), including the core repeated standard processes necessary to support the development of the company's activities (such as processes related to buying and selling the products), as well as overcome obstacles to sustaining and developing their business initiative in the early stage. This initial phase corresponds to what Chesbrough (2010) identifies as experimenting with alternative business models and Sosna *et al.* (2010) call the exploration phase, characterized by a trial-and-error learning approach. Experimenting with different alternatives in a trial-and-error process would be impossible without the analytical skills and intervention of individuals.

Similarly, individual agency is also a driving force for dealing with the changes involved in expanding the existing business model (or business model extension).

Managers have to decide if and when to launch new products and/or embark on new business opportunities, and they must also decide how to expand the core repeated standard processes that support the development of the company's activities. Demil and Lecocq (2010) have recently argued that deliberate decisions by managers are the main type of change affecting the business models of firms, but they note that other internal sources – emerging and surprising – also affect business models. However, even in these situations, human analysis of events and subsequent action are able to redefine which direction to follow.

The decision to revise an existing business model (business model revision) is also the outcome of strategic maneuvering. It is worth mentioning, however, that change can be triggered by external events (Sosna *et al.*, 2010), although it is the action of individuals that determines which course of action to follow. The literature has long emphasized the role of "change agents" (Paulson, 1982) in the transformation – or "radical" change – of organizations (Caldwell, 2003). At this stage, the challenges are quite significant, since business processes have already been firmly established within the company. It therefore requires individuals involved in the development of the company's activities to perform their tasks in a different way, using new abilities and new ways of thinking. Sosna *et al.* (2010) emphasize that, although change is usually initiated by managers at the top level, for it to become a collectively shared view people at all levels must be involved.

5. Implications

If understood as part of a firm's dynamic capabilities (Teece *et al.*, 1997; Eisenhardt and Martin, 2000), the adaptation of the business model to a firm's innovation activities assumes key strategic importance. This also implies that such capabilities can be seen as high-level strategic routines that allow firms to create new resource configurations (Teece *et al.*, 1997). Based on insights from the dynamic capability literature, it may be possible to identify the specific routines involved. In terms of cognitive change, there may be a "turning point" where the agent breaks with existing routines and switches to an active search for new alternatives. Future research could focus more on this critical juncture. Identifying some of the key triggers that actually drive an agent away from existing routines towards a search for alternatives would be highly relevant. It would also be valuable to investigate organizational processes that prevent agents from becoming locked in to highly routinized behavior, which would contribute to a better understanding of resistance to radical change and organizational inertia.

Another interesting avenue for future research would be to evaluate the impact of projects using emergent technologies for commercial purposes before their implementation. First, managers/employees would become aware that not all initiatives related to these projects affect the firm's business model: many experimental projects and prototypes developed with emergent new technologies would hardly lead to business model change, since they are of a temporary nature and consequently do not affect the core repeated processes of the firm. There are several possible challenges that already need to be overcome at this stage, but what precisely are they and how can they be dealt with? Second, projects using new technologies tend to focus on the development and commercialization of innovative applications, and are thus not linked to a simultaneous analysis of how the company's business model will be affected. From a managerial point of view, the proposed strategic framework can be used to help decision-makers determine in time whether the implementation of a particular new technology or project is likely to imply a creation, extension, revision or termination of core repeated standard processes. This in turn would enable managers to take initiatives in advance to deal with the challenges involved, such as preparing the company for a major revision or creating a new business model outside the structure of the company. This assessment in advance would not mean the adoption of a deterministic view – rather, it would benefit more conscious and proactive behaviors. Depending on the size or magnitude of the change this could also be supplemented by change point analyses. However, such analyses should allow for assessing complex and longitudinal change processes involving both quantitative and qualitative aspects, along the lines recently proposed by Müller *et al.* (2010).

One important further research step would be the development of a more detailed guide for analyzing business model change, i.e. how the introduction of change initiatives will specifically affect a firm's existing business model. How is it possible to assess the specific impact of change on a firm's business model? Our proposed framework can be used as a first stepping stone towards the development of a strategic artefact to be used for the design of business model change, which, among other things, is likely to involve playing with alternative scenarios at abstract level. The use of scenarios, for example, could target only the extension of the firm's business model, whereas others could address revisions. This artefact may also incorporate insights from the framework, including the fact that: central components of a business model vary from one business model to another; all business models have core repeated standard processes; change initiatives affect a business model in different ways (such as the extension and revision of core repeated processes); there are challenges to overcome in accordance with the type of change to be introduced. Such a design artefact would thus allow the planning of business model change in more detail, which would be useful for the systematic evaluation of change initiatives in a more structured way.

6. Conclusion

The boundaries of a business model must first be identified before it can be determined whether a change initiative will affect it or not, and (if so) to what extent. The proposed framework for developing a dynamic business model capability serves both to maintain and challenge the company's status quo by coupling the type of business model change to the innovation or change to be introduced. One important conclusion is that a business model is flexible, but only to the extent that new processes can be added or removed without jeopardizing or seriously altering existing core processes served by the existing business model. However, faced with a significant impact that involves changes in existing core processes (as in the case of a "major" business model revision), the business model will be unable to exist in its present form. In this sense, business models are still rigid, since it is necessary to dismantle the existing business model and build a new one. A dynamic business model can and should be capable of exercising both static properties (to ensure the smooth running of existing activities) and flexible characteristics (so as to be receptive to changes in the environment).

The proposed framework has bridged the gulf between a firm's innovation activities and the associated implications for its business model. The concept of the business model and the proposed strategic framework for business model change introduced in this paper – which is based on the idea of the central role of individual agency, both at the level of cognition and action – holds the promise of a vast new field for researchers and practitioners interested in continuous organizational renewal and evolution.

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