

THE BUSINESS MODEL INNOVATION MAP A FRAMEWORK FOR ANALYZING BUSINESS MODEL INNOVATION

HENRIK FLORÉN

Halmstad University, Center for Innovation, Entrepreneurship and Learning Research, Sweden
henrik.floren@hh.se (Corresponding)

ALESSANDRO AGOSTINI

Einsights Pte. Ltd., Singapore
alessandro@Einsights.com

Copyright © 2015 by Halmstad University and Einsights Pte. Ltd. Permission granted to IAMOT to publish and use.

ABSTRACT

Business model innovation has received substantial attention by both practitioners and researchers during the last fifteen years. While many companies have good processes and a shared sense of how to innovate technology, they are less capable when it comes to how they should innovate business models. This lack of practical skills is mirrored by the shortage of scholarly understanding, in which business model innovation as a phenomenon is poorly explained in comparison to e.g. product or process innovations.

Although previous research has contributed greatly to the advancements of business model innovation, our conceptual understanding of business model innovation is still rather confused. Behind this study, lies two related assumptions; (i) not all business model innovations are the same, and, (ii) different types of business model innovation will challenge firms in different ways. To this background, the purpose of this study is to develop a framework that will allow for a conceptual differentiation between different types of business model innovation.

The paper draws on previous studies in the field of technology and innovation management and develops a framework – “The Business Model Innovation Map” – that distinguishes between different types of business model innovation according to their degree of novelty. The framework is illustrated by several real-life examples of business model innovation.

The paper adds to our understanding of innovation management as it allows for a better understanding of business model innovation as a distinct type of innovation. More specifically, it helps differentiating transformative business model innovations from mere incremental ones, and, as such, it presents a novel approach to categorize different types of business model innovation. The framework can serve as a basis for future in-depth empirical investigations of different types of business model innovation that can help firms to better understand how to manage such innovations.

Key words: Business Model Innovation, conceptual framework, Transilience Map

INTRODUCTION

This paper aims to further our understanding of business model innovation. On the most general level, a business model (BM) captures how a firm develops, delivers and captures value. From previous research, we know that new BMs have the potential to unlock market potential in

technological innovation (Chesbrough, 2007, Chesbrough and Rosenbloom, 2002) and drive competitive advantage (Teece, 2010), firm growth and profit (Baden-Fuller, MacMillan, Demil and Lecocq, 2010; Casadesus-Masanell and Ricart, 2010). Adding to the recent exploding interest in BMs is the proposition that “[...] a mediocre technology pursued within a great business model may be more valuable than a great technology exploited via a mediocre business model” (Chesbrough, 2010, p. 355). In the wake of statements like this (and supporting empirical evidence), the BM has been recognized as a valuable tool for building and sustaining the long-term competitiveness of the firms.

However, from history we know that “no great business model lasts forever ... a company is going to need to think hard about how to sustain and innovate its business model” (Chesbrough, 2007, p. 15). Of the top 12 companies which made up the Dow Jones index in 1900, only one (General Electric) survives today (Tidd and Bessant, 2013), and out of the 500 companies originally making up the Standard and Poor 500 list in 1857, only 74 remained on the list through to 1997 (Foster and Kaplan, 2002). Additionally, if we investigate the ranking of the 100 biggest companies in the world, only 21% of the companies in the 2013 Fortune 100 were also on the 1980 list. In many of these cases, the reason for the failure to survive can be traced to the inability to renew the business model of the firm, and there is a virtual consensus that, to remain competitive over time and sustain future growth, firms must continuously develop and adapt their BMs (Sosna *et al.*, 2010; Teece, 2010; Amit *et al.*, 2011; Amit and Zott, 2012; 2013). Adding to these historical facts, numerous success stories (such as IBM, Apple, Gillette) as well as failures (such as Hasselblad, Kodak, Nokia (cell phones)) stress the importance of reassessing and redesigning the way firms create, deliver and capture value or in short; the importance of business model innovation (BMI).

Adding to our understanding of the importance of BMI is a study conducted by BusinessWeek together with Boston Consulting Group that showed BM innovators earned a premium, over the average Total Shareholder Return, that was more than four times greater than that enjoyed by product or process innovators (Lindgardt *et al.*, 2009 found in Sorescu *et al.*, 2011). In another study, IBM also found that firms that were financial outperformers put twice as much emphasis on BMI as underperformers (Amit *et al.*, 2011; Giesen *et al.*, 2007). Many other academics praise the sustainable benefits coming from BMI, which is expected to become even more important than product and process innovation (Sosna *et al.*, 2010; Amit and Zott, 2012; Wu *et al.*, 2010; Casadesus-Masanell and Zhu, 2012; Weill and Vitale, 2001, Chesbrough, 2007).

So the importance of BMI seems clear. However, many firm struggle with this critical activity. In the IBM's Global CEO Studies for 2006 and 2008 it is concluded that managers are actively seeking guidance on how to innovate in their BMs (Casadesus-Masanell and Ricart, 2010). This could explain the observation made by Johnson *et al.* (2008, p. 60) that shows that, of the major innovations within existing corporations in the past decade, only few have been business-model related. Similar findings have been reported by Giesen *et al.* (2007), who claim that many business leaders have a difficult time even defining BMI.

To this background it is not surprising that BMI has been recognized as an important and distinct management research topic (Lambert and Davidson, 2012). Recent research has, as a consequence of this rising recognition of the phenomenon, contributed greatly to our understanding of BMI. To begin with, it is now clear that BMI is important to both short- and long-term competitiveness, and previous research has also showed that incremental and continuous BM changes are more prevalent than radical changes (BMI) (Demil and Lecocq, 2010). We also know that innovating the BM is

challenging to manage (and difficult to imitate), since it involves a multidimensional set of activities (Johnson *et al.*, 2008; Wirtz *et al.*, 2010; Teece, 2010; Desyllasa and Sako, 2013). Furthermore, we also know that companies tend to have many more processes and a much stronger shared sense of how to innovate technology than they do about how to innovate BMs (Chesbrough, 2010).

Interestingly, the status of firms' ability to manage BMI proficiently mirrors the scholarly understanding of the phenomenon. In comparison to our understanding of how to manage e.g. product or process innovations, the empirical phenomenon of BMI is still poorly understood (Amit *et al.*, 2011; Casadesus-Masanell and Zhu, 2012), and little attention has yet been paid to systematically investigate how companies should deal with BMI (Wirtz *et al.*, 2010; Amit and Zott, 2010).

In this paper, and in line with previous research (Koen *et al.*, 2011), we argue that BMI should be considered as a new type of innovation that is distinguishable from other types of innovations such as product, market or process innovations. So far, however, research on BMI have often considered the innovation of a BM as a dichotomy, either there is or there is not, thus failing to recognize its complex nature. This simplification clashes with the claims of many academics that consider BMI as a new type of innovation, similar but distinct to product, market or process innovation (Koen *et al.*, 2011). Hence, it makes sense to conceptualize BMI in a similar way as for other types of innovations. Yet, previous research has not fully explored the characteristics of this specific type of innovation, and this is where this study aims to contribute.

A review of how BMI has been defined in previous research shows many different definitions (which is also expected as the body of knowledge is still immature). A few examples can serve as illustration. According to Wirtz *et al.* (2010), change in a BM becomes BMI when two or more elements are reinvented to create value in a different way. For Johnson *et al.* (2008, p.64), a "[n]ew business model is required when all elements of the current business model are needed to change." Others are more general, and argue that BMI occurs when a firm adopts a novel approach to commercializing its underlying assets (Gambardella and McGahan, 2010) or by improving the mechanism of creating and capturing value from all the activities the company is involved (Casadesus-Masanell and Ricart, 2011; Chesbrough, 2007).

This lack of consensus and definitional consistency represents a potential source of confusion. Being able to differentiate between types of BMI makes sense because of many reasons. First, from a management point of view we can assume that different types of BMI will pose different types of challenges on the firm and therefore demand different types of management. Research on product innovation has clearly shown that managing incremental product innovations are different from managing radical innovations, and it makes sense to assume that the same goes for different types of BMI. Expressed differently; managing an incremental change of a BM is likely to pose different challenges than managing a radical change of the BM. Secondly, empirical findings of BMI will be difficult to interpret and makes sense of if the findings are not related to different types of BMI. For example, findings related to barriers to BMI should recognize the existence of different types of BMI, as some barriers might be exclusive to certain BMI types while not to others (see e.g. Sandberg and Aarikka-Stenros, 2014, in press)

To this background, an assumption behind this study is that not all the BMIs are the same, and that different types of BMI will challenges firms in different ways. So far, however, our conceptual

understanding of different types of BMI is scarce. Various researchers have presented tentative models to categorize different types of BMI (see e.g. Lindgardt *et al.*, 2009; Giesen *et al.*, 2007). Yet, these models have yet to prove their validity and so far have generated poor general findings. In this paper we will present an alternative conceptual framework that differentiates BMIs by their degree of innovativeness. More specifically, our purpose is to develop a framework to categorize different types of BMI according to their degree of novelty.

The paper will be structured in the following way. Before turning to the development of the framework, we will briefly elaborate the business model concept, ending with a guiding definition that will be used to develop the framework. The development of the framework will draw on previous theories of technology and innovation management, and be illustrated by means of real-life examples from well known enterprises. The paper will be concluded with a discussion of the implications of the framework in terms of future research as well as a brief note on its managerial implications.

DEFINITION AND REPRESENTATION OF A BUSINESS MODEL

Studying the changes of a BM in a fine-grained manner demands the identification of its core components as a first step, before dealing with the complex processes of innovation (Demil and Lecocq, 2010). The prolonged debate on the components of a BM helped to focus the attention on the core processes that deserve most of the attention (Cavalcante *et al.*, 2011), but there still exist two different streams of research that need to be recognized. On the one hand, the authors who describe *ex ante* the main components of a BM (Osterwalder, 2005; Johnson, 2008 found in Demil and Lecocq, 2010), and on the other hand, the ones who adopt a more inductive approach (Casadesus-Masanell and Ricart, 2010). Both views have pros and cons, but according to Siggelkow (in Demil and Lecocq, 2010, p.231), the "*advantage of an ex ante specification of core elements is that changes in these elements can be measured consistently across firms.*"

Aligned with what has been argued by others, this study subsumes to the idea that BMs can be represented as "Meta-models that consist of elements and relationships that reflect the complex entities that they aim to describe." (Osterwalder *et al.*, 2005, p. 5; see also Amit and Zott, 2012). In other words, BM is considered as a structure composed of different activities and links among these activities, as depicted by Osterwalder *et al.* (2005) in the "business model concept hierarchy".

More specifically, in this study we will rely on one of the most widely diffused representations of BM; the one created by Johnson *et al.* (2008), who divided the BM concept into four different components:

- i. Value proposition
- ii. Profit formula
- iii. Key resources
- iv. Key processes

This representation describes BM in terms of relatively broad components, thus avoiding confining the analysis to narrow, predefined conceptual categories that may only suit specific types of organizations or BMs (Demil and Lecocq, 2010). Below will follow a description of the meaning of these BM components.

Value proposition. Arguably, value creation and value capturing are the ultimate goals of a BM and the value proposition contains the details of how the company achieves them. According to Johnson *et al.* (2008), there are three constituent parts of the value proposition: the *problem* that has to be solved; the *target group* of people who experiences first-hand the issue and the *offering*, which satisfies the problem or fulfils the need.

Profit formula. It represents the revenue mechanism by which the firm will be paid and the cost incurred in performing the activities (Johnson *et al.*, 2008). It is a blueprint that describes how the company captures value for itself. The revenue model, the cost structure and the profit margin are all parts of the profit formula.

Key resources. The key resources are assets such as the people, technology, products, facilities, equipment, channels, and brand required to deliver the value proposition (Johnson *et al.*, 2008). Not only those elements are important, but also how they interact between each other could determine the success of a BM.

Key processes. Managerial and operational processes necessary to deliver and capture value in a systematic way (Johnson *et al.*, 2008). Examples are training, development, manufacturing, budgeting, sales and service.

These four components can be used to understand the building blocks of any business. The customer value proposition and the profit formula define the value for the customer and the company, respectively; key resources and key processes describe how that value will be delivered to the customer and captured by the company (Johnson *et al.*, 2008). With the four-components-model as a beginning we can start to develop a framework that differentiates between different types of BMI.

DEVELOPING THE BUSINESS MODEL INNOVATION MAP

As mentioned above, researchers have yet to agree on a common theoretical ground, and little attention has been paid to analyze how companies can achieve BMI (Wirtz *et al.*, 2010; Amit and Zott, 2010). This lack of clarity and definitional consistency represents a potential source of confusion. For the purpose of this paper, BMI is identified as: "[a] process of refining existing BM, which often results in lower cost of increased value to customers." (Teece, 2010, p.181)

But when exactly does a change of the BM become a BMI? We know that incremental and continuous BM changes are more prevalent than radical changes (BMI) (Demil and Lecocq, 2010), but we also agree that not all changes are equal in terms of their impact and how they need to be managed. Some changes may have no effect on the existing BM of an organization. For example, small improvements in the manufacturing process will usually not require BMI (Teece, 2010). Cavalcante *et al.* (2011) claim that several experimental projects and prototypes developed with emergent new technologies would hardly lead to BM change. Other initiatives, however, may completely revolutionize the BM, leading to something that could be labelled a BMI. To find a common ground for the discussion we will in the following paragraphs develop a framework that differentiates between different types of BMIs: the BMI Map. This elaboration will be supported with real-life examples to illustrate the depicted types of BMI.

Several indices have been developed to measure the "magnitude" of an innovation. Examples are: radical vs. incremental (Abernathy, 1978), modular vs. architectural (Henderson and Clark, 1990),

competence enhancing vs. competence destroying (Tushman and Anderson, 1986). Understanding this concept is crucial to avoid failing to distinguish bold audacious bets from the unheralded incremental ones (Wessel, 2014). However, this reasoning does not currently apply to BMI. The "magnitude-dimension" that is widely supported for process, market and product innovations is an almost ignored concept in the BMI literature. This might blur the process towards a more solid understanding of BMI, as well as confusing researchers, generating conflicting findings. On the one hand, we find advocates of BMI as a supporter of other types of innovation (Teece, 2010; Amit and Zott, 2010; 2012; 2013; Boons and Lüdeke- Freund, 2012). On the other hand, there is a large group that sustains the uniqueness of BMI (Wu *et al.*, 2010, Markides, 2006; Bock *et al.*, 2012; Chesbrough, 2010; Demil and Lecocq, 2010; Amit *et al.*, 2011; Amit and Zott, 2012; Teece, 2010; Johnson *et al.*, 2008; Desyllasa and Sako, 2013).

The lack of a framework to measure the novelty (the magnitude-dimension) of BMI is therefore problematic. In fact, instituting a proper measurement for BMI is the first step to close the gap with the literature of product, market and process innovation. The view adopted in this study is similar to Cavalcante *et al.* (2011): BMI is considered as a general term that includes different types of BM change, each one identified by its own degree of novelty.

We know from previous research that the process of innovating the BM differs across types of organizations (Sheehan and Stabell, 2007, in Amit *et al.*, 2011; Cavalcante *et al.* 2011). With reference to the four-components of BM presented above, according to Wirtz *et al.* (2010), on an overall level, change in a BM becomes BMI when two or more elements are reinvented to create value in a different way. For Johnson *et al.* (2008, p.64), a "*New business model is required when all elements of the current business model are needed to change.*" Amit and Zott (2012) explain that new BMs occur by either adding novel activities, by linking the current activities in a new way during the value creation process or by changing the parties that perform the activities.

In this paper, we take the stance that the existing competences (i.e. capabilities) of an organization play a central role when trying to understand different types of BMI. With this in mind, our framework is inspired by the ideas of Abernathy and Clark (1985), in which they state that innovations, to different degrees, either make existing competences obsolete or reinforcing them.

This approach is chosen for a number of reasons. First, the aim of Abernathy and Clark's investigation was to develop a framework to categorize different types of innovation (Abernathy and Clark, 1985), which mirrors the aim of this study. Secondly, and more importantly, the focus of this study is not on the barriers that *impede* a company to innovate the BM, but rather on the challenges faced *during* the process of innovating the BM. Abernathy and Clark adopted the same focus when they zeroed in on the process of innovating. Lastly, the idea of investigating different types of BMI, by classifying them according to if they make existing competences obsolete or if they reinforce them, reflects the idea that not all innovations are equal, but some – from a firm point of view – are certainly more disruptive than others. Based on this idea we now introduce the BMI Map.

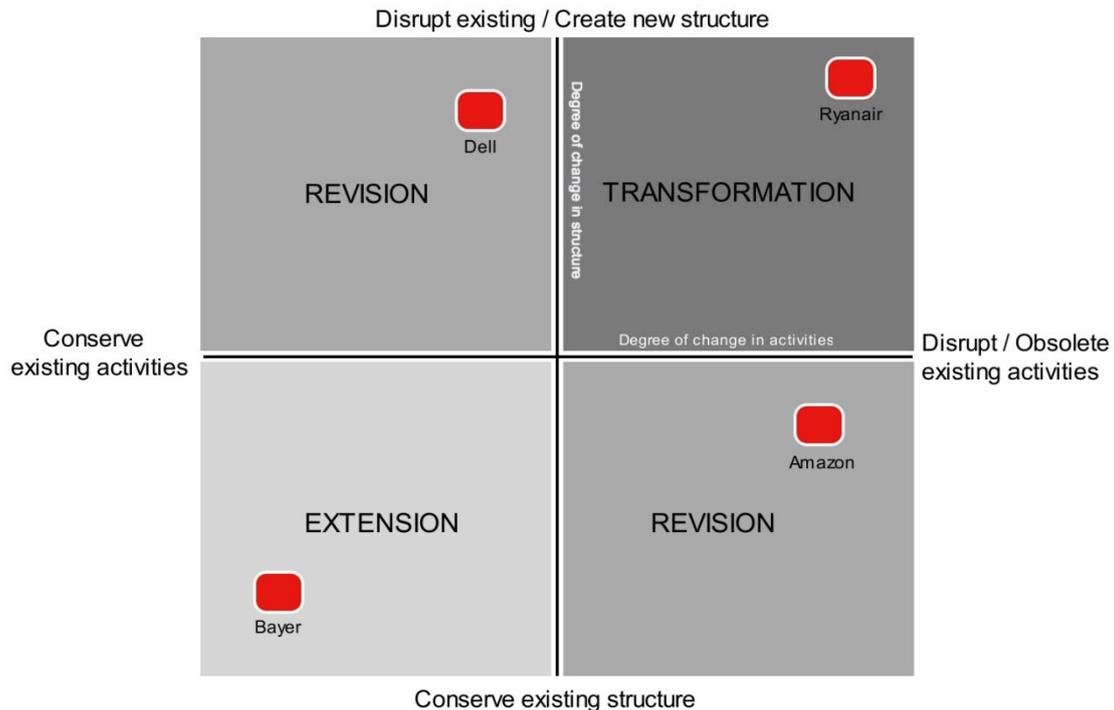


Figure 1: The BMI Map (adapted from Abernathy and Clark's Transilience Map, 1985)

Amit and Zott (2012) proposed that new BMs occur by either adding novel activities, by linking the current activities in a new way during the value creation process or by changing the parties that perform the activities. The logic of the framework is that *change in the BM may be due to a change in activities, structure or both*. Change in activities refers to any modification of the four key constituents of a BM (profit formula, value proposition, key resources and key process), such as changes in the content or in the governance of these activities (Amit and Zott, 2012). Change in the structure takes place when activities are linked in a different way or the sequence in which these activities are performed during the process of delivering value has been altered (Amit and Zott, 2012). Following this discussion, three questions can serve as means to diagnosing different types of BMI:

- i. To what extent, could the existing structure house the new business model?
- ii. To what extent, could the existing linkages represent the new business model?
- iii. Are routine processes still functional or should new ones replace them?

In Figure 2, we have positioned the change in structure in the vertical dimension and the change in activities in the horizontal one. This creates a map with four quadrants, each of them representing a different type of BMI. From this framework three types of BM innovation can be identified: (i) Business model extension, (ii) Business model revision, and (iii) Business model transformation.

Each of the three types of BMI is accompanied by a scale that measures the significance of change (of structure or activities). The range is defined by polar extremes: one conservative and the other one radical. The conservative side represents situations that enhance and reinforce the firm's existing structure or linkages, leveraging the past investments already made. On the radical end of the scale, changes in activities and structure of the BM result in the opposite. Instead of strengthening the existing situation, they reduce its value and, in extreme cases, make it obsolete

(Abernathy and Clark, 1985). In this section, new BMs rely on a combination of processes, structure, activities and resources that are very different from the old ones. This does not necessarily mean that new core competences are developed; it can merely be the reconfiguration of them. Hence, the different combinations of "change in activities" and "change in structure" depicted in figure 2 result in three different impacts on the BM.

Regarding the shifts between quadrants, a precise definition involves a certain amount of subjectivism. The transition from a BM extension to a BM revision is often associated with either a significant change in 2+ dimensions of Johnson's BM framework (Johnson *et al.*, 2008), or in relevant transformations in teamwork routines, procedures, practices, interactions among employees and with external partners (customers, distributor, suppliers). When these changes happen simultaneously, we are in the presence of a BM transformation. In the following paragraphs, we shall illustrate each category using practical examples.

Business Model Extension

Change in structure: LOW. Change in activities: LOW

Business model extension would build on and enforce both the existing activities and structure of the firm, which will be of primary importance in delivering and capturing the value. It exploits the potential of the current BM in order to grow further. Clearly, all BM extensions impose a change of some kind, but this change has not to disrupt the current BM of the company.

It is not possible to define precisely which and how many components of the BM have changed; every case is different. A geographical expansion may require a different value proposition or the development of new partnerships. Yet, it is only a matter of bringing the same and successful BM to a different place, with the proper adjustments. The previous statement is not meant to play down the complexity of a business expansion. It is a difficult process but, in terms of the BM, the overall impact is marginal. Generally, BM extension is associated to the exploration of opportunities for enlarging the business or to the exploitation of associated commercial opportunities (Cavalcante *et al.*, 2011). It includes, but does not limit to, the refreshment of an organization's product lines with "new and improved" versions, and related changes in new distribution channels (e.g. e-commerce), the addition of complementary activities, the geographic expansion to a similar country and market penetration.

Bayer, a German leading pharmaceutical company, well known for the painkiller Aspirin, has carried out one of the most successful rebranding strategy. In the 1980, academic research showed, with apparently undeniable evidence, that Aspirin had also a positive effect on the heart well being. With Bayer Aspirin's pain relief market share down to 6%, the company re-positioned Aspirin as a preventer of heart attacks. Bayer did not change the drug composition, nor did it change the price. It only modified the value proposition: "from a painkiller to a lifesaver", and maybe few minor activities such as partnerships or distribution channels. This simple but important change brought billions of new sales for the company, leaving the BM substantially untouched and intact. The company reinforced and exploited existing components of the BM expanding its potential target customers through the creation of a new value proposition.

Table 1- Bayer business model

Bayer old business model		Bayer new business model
Sold as an effective painkiller with a broad range of usage. Sold in 500mg tablets.	Value proposition	Branded as a “wonder drug”, with life-saving properties. Sold in pills and chewable flavoured gums. Creation of different target offerings: for women, for headache, for body pain, double dosage/singe dosage.
Focus on growth.	Profit formula	Cash-cow; high price (compared to competitors), high volume and high margins
Brand name, logo and distribution through pharmacies.	Key resources	Brand name, logo and distribution through pharmacies and major retailers. Hefty commissions to distribution partners; strong relationships.
Manufacturing process is paramount	Key processes	Stayed the same, with only minor tweaks in terms of marketing and manufacturing.
N/A	Structure	N/A

Business Model Revision 1 & 2

(1) Change in structure: LOW/Change in activities: HIGH. (2) Change in structure: HIGH/Change in activities: LOW

BM revision is represented by two quadrants in figure 2: upper left and bottom right. This type of change is characterized by the reinforcement of existing components of the BM, and the simultaneous disruption of others. A revision of the BM leverages the company's current competencies to create new — sometimes disruptively new — positions (Linder and Cantrell, 2000). Hence, the existing configuration of the BM is still important, but not sufficient to make the new BM succeed. New linkages or activities have to be developed. Indeed, revision implies *"Following a different direction and/or exploring alternative ways of doing business"* (Cavalcante et al., 2011 p. 1333).

The BM revision can be further divided into two sub-categories. The bottom-right quadrant represents a BM characterized by new disrupting activities, but the structure is roughly similar. On the other hand, the upper-left quadrant describes situations where mainly the sequence in which the activities are performed, or the links among them, is disrupted. An example of how to revise the BM by changing the sequence (or links) of activities is given by Dell.

In 1999, Dell became the largest PC manufacturer in the world. The company did not sell a product with special characteristics, nor the price was cheaper than the competitors'. Instead of relying on wholesalers, retailers and intermediaries, Dell commercialized its products directly to consumers via the Internet. Moreover, the company manufactured the PC after the order has been completed, not before as for all the other competitors (built-to-order concept). Finally, Dell built

direct relationships with its customers, enabling the company to predict trends earlier than anybody else. This shows how Dell revolutionized the structure of its BM, which inevitably had a numerous effects also on the company's activities.

Table 2 - Dell business model

PC manufacturers old business model		Dell's new business model
Target consumer families and first-time buyers with limited technological background. Selling a product.	Value proposition	Target technology-literate consumers who look for quality at a reasonable price. Selling a service.
Higher price, lower margin	Profit formula	Avoid dealer mark-up. High profit margin. Built-to-order (no inventory)
Retailer and distribution channel partnerships. Core competences were product innovation and development.	Key resources	Strong customer support and immediate feedback led to superior market information and ultimately the possibility to anticipate market needs.
Buy items to keep as inventory (flexibility to meet unstable demand). Manufactured all the needed parts.	Key processes	High profits allowed Dell to invest in efficient procurements, manufacturing and distribution networks, minimizing product obsolescence. Assembling computers.
Indirect sales model: Factory → Distributor → Reseller → Consumers	Structure	Direct sales model: customers connected directly to the manufacturer. E-commerce.

A different example of BM revision, which finds its place in the bottom right quadrant of the BMI Map, is represented by Amazon. In particular, the introduction of the e-book reader Kindle in 2007. The company born in 1995 as an online bookstore, it is now one of the biggest e-commerce stores, owning various diversified businesses. The Kindle certainly represents a steppingstone of Amazon's success. Amazon leveraged its existing retail platform and encouraged publishers to develop digital content by offering hefty profits on the eBooks. At the same time, the company developed new hardware capabilities necessary to build the product and it positioned the Kindle *not as a device, but as a service*. Hence, Amazon is considered an example of BM revision, since the company started manufacturing the hardware itself, not only distributing others companies' articles. Moreover, the introduction of the Kindle could be considered as the first step that ultimately led Amazon to become a publishing house.

Table 3 - Amazon business model

Amazon old business model		Amazon new business model
Low-cost online bookstore and retailer. Price and convenience.	Value proposition	Sale of the Kindle ecosystem (tablet, media store, e-books)
High economies-of-scale	Profit formula	Sales of hardware (low margin) along with sales of media content (high margin). High economies-of-scale and locked eco-system.
Distribution of products. Warehouse distribution centres. Outstanding customer service.	Key resources	Creation of products. Warehouse distribution system. Outstanding customer service.
	Key processes	Manufacturing capabilities. Publishing books.
Business through its e-commerce platform.	Structure	Business through its e-commerce platform.

Business Model Transformation

Change in structure: HIGH. Change in activities: HIGH

Whether BM transformation creates a new market or whether it reformulates an established industry, this type of BM change necessitates new linkages, structures and processes that make existing investments obsolete. BM transformation always brings an element of newness: it is new at least to the organization that is introducing it, if not to the market itself.

In the last case, it is likely to create a sustainable competitive advantage (Teece, 2010). The creation of new activities and linkages is required, which will differ significantly from the ones in the old BM. New products or services that require substantially different capabilities; penetration into a market by introducing a new BM; opening of a new market; the switch from a product to a service solution strategy; they all potentially lead to innovative BMs.

Ryanair is an example of a successful BM transformation. Being at the brink of bankruptcy in 1990 (Casadesus-Masanell and Ricart, 2010), Ryanair's management team completely overhauled the entire company; going from a full-service airline company to a low-cost BM. Ryanair changed the customers' perception of the airline transport business. Low fares, low service, secondary airports, standardized fleet of 737s and many other key choices determined the fortune of Ryanair. Not only did the core activities change substantially, but also their interconnection; e.g. commission for travel agencies was seriously cut. Customers started paying directly to Ryanair and all the key resources (equipment, people, partnerships etc.) were tied to achieving the lowest possible cost. Ryanair disrupted the structure and the links of the BM it previously had, creating new processes, activities and links to support the firm's strategy.

Table 4 - Ryanair business model

Traditional business model		Ryanair business model
Comfortable journey. Main target is business people.	Value proposition	The cheapest way to reach a destination. Target is leisure travellers.
Full-service model. Average volume. All service included.	Profit formula	Low-cost model. High volume. "Nothing free"-policy.
Primary airports. Diversified fleet. Economy, business and first class. Powerful trade-union.	Key resources	Partnerships with secondary airports. Standardized fleet of 737s. Single class. Lack of trade-union (high bargaining power).
Long and short haul flights.	Key processes	Short haul flights.
Indirect sales model: Customers → Travel agencies → airline company.	Structure	Directs sales model: Customers → airline company (via website).

The cases described above serves as illustrations of the different types of BMI depicted in the BMI map.

CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

The BMI Map draws its empirical foundations from previous studies made in the field of technology and innovation management and it depicts three types of BMI. The BMI Map contributes to extant research in a number of ways. First, it is based on the principle that there exist different BMIs that can be classified according to their degrees of novelty. Conceptually, this places BMI on a par with product, process, and market innovations, hence filling an important gap in the literature. Second, it conceptually differentiates between truly transformative BMIs and mere incremental ones. Thirdly, and as an extension to the second point, it opens up for a new approach to categorize organizations according to the level of innovativeness in terms of their BMI activities, which – in turn – can be used to further investigate patterns of e.g. challenges of BMI among similar companies.

Our hope is that future research on this important area can build on the framework and thereby provide additional insights based in empirical observations of this phenomenon. We suggest three areas of particular interest.

As a first step, it is necessary to validate the framework in operational use. Operationalization is a procedure to define the measurement of a phenomenon that is not directly measurable. In furthering this study, one important goal would be to develop a measure that can be used to more precisely investigate the degree of BM innovativeness in accordance with the proposed framework. Clearly, the operational use of the entire model is still in question. Thus, we propose to focus the attention on three elements that require further work. First, a better definition of the borders between the quadrants is needed. Especially the differences between the two quadrants named "revision" needs to further explored. It makes sense to assume that they should be distinguished, but explorative research is necessary to better understand if and under which circumstances this should be done.

Secondly, we suggest that our framework is used in future research to pursue empirical investigations of challenges related to the different types of BMI. As long as our understanding of such specific challenges is limited, it might prevent managers to embark on BMI projects. Despite being aware that it is impossible to predict the future challenges, we would claim that having a sufficient overview of the typical challenges that characterize certain types of BMI might increase the confidence level among managers (confer the situation within management of product innovation, in which our understanding of the generic challenges related to e.g. radical and incremental product development, respectively, is well developed). Such knowledge would help firms to come up with better ways to manage their BMI processes.

Thirdly, we would like to propose that future research challenges the now widely accepted "trial and error" approach that has been proposed within the BMI literature. Many are the advocates of using experimentations in the process towards achieving BMI (Chesbrough 2010; Amit and Zott, 2001; Sosna *et al.*, 2010; Sinfield *et al.*, 2012). For example, Chesbrough (2010) claims that regardless the nature of the challenge encountered, the "way forward is via a commitment to experimentation". We would argue that the strong emphasis on the approach "try something, see if it works, then proceed to the next step" risks to lead to only a succession of incremental experiments. This approach should have its merits but it probably also has its limits. As long as our understanding of different types of BMI is limited, the trial-and-error approach might be valid, but we would suggest that future research should aim to provide further empirical evidence that can help managers to make sound decisions ex-ante. When such knowledge exists it will enable firms to start the BMI process with the right foot and then adjust their actions over time in a way that corresponds to identified generic findings associated with the specific type of BMI the firm is undertaking.

Albeit this study is mainly thought as a step towards future more specific empirical research on BMI, from a managerial point of view the BMI map could serve as a basis for developing a management tool to evaluate the impact of specific changes to a firm's BM. Although future empirical research is needed before solid evidence can be provided, the map at least pinpoints the facts that different types of BMI exist and that firms should expect different challenges related to each type. This should enable firms to better forecast the countermeasures needed to avoid unnecessary mistakes. Moreover, although the framework as such does not include the concept of risk, we suggest that managers consider the notion of risk related to the different types of BMI when embarking on BMI projects. By focusing on the management of risks that is related to the type of BMI the firm is aiming for, managers can increase the likelihood of achieving successful outcomes in their BMI endeavours.

REFERENCES

- Abernathy, W. J. (1978), *The Productivity Dilemma*. John Hopkins University Press, Baltimore.
- Abernathy, W. J., and Clark, K. B. (1985), Innovation: Mapping the winds of creative destruction. *Research policy*, 14(1), 3-22.
- Amit, R., and Zott, C. (2001), Value creation in e-business. *Strategic Management Journal*, 22(6-7), 493-520.
- Amit, R., and Zott, C., (2010), Business model design: an activity system perspective. *Long Range Planning*, 43(2), 216-226.

- Amit, R., Massa, L., and Zott, C., (2011), The business model: recent developments and future research. *Journal of Management*, 37(4), 1019-1042.
- Amit, R., and Zott, C. (2012), Creating value through business model innovation. *MIT Sloan Management Review*, 53(3), 41-49.
- Amit, R., and Zott, C. (2013), The business model: a theoretically anchored robust construct for strategic analysis. Working Paper.
- Bock, A. J., Opsahl, T., George, G., and Gann, D. M. (2012), The effects of culture and structure on strategic flexibility during business model innovation. *Journal of Management Studies*, 49(2), 279-305.
- Boons, F., and Lüdeke-Freund, F. (2012), Business models for sustainable innovation: state-of-the-art and steps towards a research agenda. *Journal of Cleaner Production*, 45(4), 9-19.
- Casadesus-Masanell, R., and Ricart, J. E. (2010), From strategy to business models and to tactics, *Long Range Planning*, 43, 195-215.
- Casadesus-Masanell, R., and Ricart, J. E. (2011), How to design a winning business model, *Harvard Business Review*, 89(8-9), 100-107.
- Casadesus-Masanell, R., and Zhu, F. (2012), Business model innovation and competitive imitation: the case of sponsor-based business models. *Strategic Management Journal*. 34, 464-482.
- Cavalcante, S., Kesting, P., and Ulhøi, J. (2011), Business model dynamics and innovation: establishing the missing linkages. *Management Decision*, 49(8), 1327-1342.
- Chesbrough, H., and Rosenbloom, R. S. (2002), The role of the business model in capturing value from innovation: evidence from Xerox corporation's technology spin-off companies, *Industrial and Corporate Change*. 11(3), 529-555.
- Chesbrough, H. (2007), Business model innovation: it's not just about technology anymore. *Strategy and Leadership*, 35(6), 12-17.
- Chesbrough, H. (2010), Business model innovation: opportunities and barriers. *Long Range Planning*, 43(2), 354-363.
- Demil, B., and Lecocq, X. (2010), Business model evolution: in search of dynamic consistency. *Long Range Planning*, 43(2), 227-246.
- Desyllas, P., and Sako, M. (2013), Profiting from business model innovation: Evidence from Pay-As-You-Drive auto insurance. *Research Policy*, 42(1), 101-116.
- Foster, R., and Kaplan, S. (2002), *Creative Destruction*. Cambridge, MA, Harvard University Press.
- Gambardella, A., and McGahan, A. M. (2010), Business-model innovation: General-purpose technologies and their implications for industry structure. *Long Range Planning*, 43(2), 262-271.
- Giesen, E., Berman, S. J., Bell, R., and Blitz, A. (2007), Three ways to successfully innovate your business model. *Strategy and Leadership*, 35(6), 27-33.
- Giesen, E., Riddleberger, E., Christner, R., and Bell, R. (2010), When and how to innovate your business model. *Strategy and Leadership*, 38(4), 17-26.
- Henderson, R. M., and Clark, K. B. (1990), Architectural innovation: the reconfiguration of existing product technologies and the failure of established firms. *Administrative Science Quarterly*, 35(1), 9-30.

- Johnson, M. W., Christensen, C. M., Kagermann, H. (2008), Reinventing Your Business Model. *Harvard Business Review*, 86(12), 50-68.
- Koen, P. A., Bertels, H. M., and Elsum, I. R. (2011), The three faces of business model innovation: challenges for established firms. *Research-Technology Management*, 54(3), 52-59.
- Lambert, S. C., and Davidson, R. A. (2012), Applications of the business model in studies of enterprise success, innovation and classification: An analysis of empirical research from 1996 to 2010. *European Management Journal*, 31(6), 668-681.
- Linder, J. and S. Cantrell (2000), *Changing Business Models: Surveying the Landscape*. Accenture Institute for Strategic Change.
- Lindgardt, Z., Reeves, M., Stalk, G., and Deimler, M. S. (2009), *Business Model Innovation. When the game gets tough, change the game*, The Boston Consulting Group.
- Markides, C. (2006), Disruptive Innovation: In Need of Better Theory. *Journal of Product Innovation Management*, 23(1), 19-25.
- Markides, C. C. (2013), Business model innovation: What can the ambidexterity literature teach us?. *The Academy of Management Perspectives*, 27(4), 313-323.
- Osterwalder, A., Pigneur, Y., and Tucci, C. L. (2005), Clarifying business models: Origins, present, and future of the concept. *Communications of the Association for Information Systems*, 16(1), 1-25.
- Osterwalder, A., and Pigneur, Y. (2010), *Business model generation—a handbook for visionaries, game changers, and challengers*. New York Wiley.
- Pauwels, K., and Weiss, A. (2008), Moving from free to fee: how online firms market to change their business model successfully. *Journal of Marketing*, 72(3), 14-31.
- Sandberg, B. and Aarikka-Stenros, L. (2014), What makes it so difficult? A systematic review on barriers to radical innovation, *Industrial Marketing Management*, <http://dx.doi.org/10.1016/j.indmarman.2014.08.003>.
- Sorescu, A., Frambach, R. T., Singh, J., Rangaswamy, A., and Bridges, C. (2011), Innovations in retail business models. *Journal of Retailing*, 87, 3-16.
- Sosna, M., Trevinyo-Rodríguez, R. N., and Velamuri, S. R. (2010), Business model innovation through trial-and-error learning: The Naturhouse case. *Long Range Planning*, 43(2), 383-407.
- Teece, D. J. (2010), Business models, business strategy and innovation. *Long Range Planning*, 43(2), 172-194.
- Tidd, J. and Bessant, J. (2013), *Managing Innovation*, Wiley, Chichester.
- Tushman, M. L., and Anderson, P. (1986), Technological discontinuities and organizational environments. *Administrative Science Quarterly*, 31(3), 439-465.
- Weill, P. and Vitale, M. R. (2001), *Place to Space: Migrating to E-business Models*. Boston, MA: Harvard Business School Press.
- Wessel, M. (2014), Say “No” to Innovation-in-General. www.blogs.hbr.org [18 February 2014].
- Wirtz, B. W., Schilke, O., and Ullrich, S. (2010), Strategic development of business models: implications of the Web 2.0 for creating value on the internet. *Long Range Planning*, 43(2), 272-290.

Wu, X., Ma, R., and Shi, Y. (2010), How do latecomer firms capture value from disruptive technologies? A secondary business-model innovation perspective. *IEEE Transactions on Engineering Management*, 57(1), 51-62.