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Article

Business model innovation: A review and research agenda

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Business model innovation: a review and research agenda

Business
model
innovation

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89

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Abstract

Purpose – The aim of this paper is to review and synthesise the recent advancements in the business model literature and explore how firms approach business model innovation.

Design/methodology/approach – A systematic review of business model innovation literature was carried out by analysing 219 papers published between 2010 and 2016.

Findings – Evidence reviewed suggests that rather than taking either an evolutionary process of continuous revision, adaptation and fine-tuning of the existing business model or a revolutionary process of replacing the existing business model, firms can explore alternative business models through experimentation, open and disruptive innovations. It was also found that changing business models encompasses modifying a single element, altering multiple elements simultaneously and/or changing the interactions between elements in four areas of innovation: value proposition, operational value, human capital and financial value.

Research limitations/implications – Although this review highlights the different avenues to business model innovation, the mechanisms by which firms can change their business models and the external factors associated with such change remain unexplored.

Practical implications – The business model innovation framework can be used by practitioners as a “navigation map” to determine where and how to change their existing business models.

Originality/value – Because conflicting approaches exist in the literature on how firms change their business models, the review synthesises these approaches and provides a clear guidance as to the ways through which business model innovation can be undertaken.

Keywords Innovation, Business model, Value proposition, Value creation, Value capture

Paper type Literature review

1. Introduction

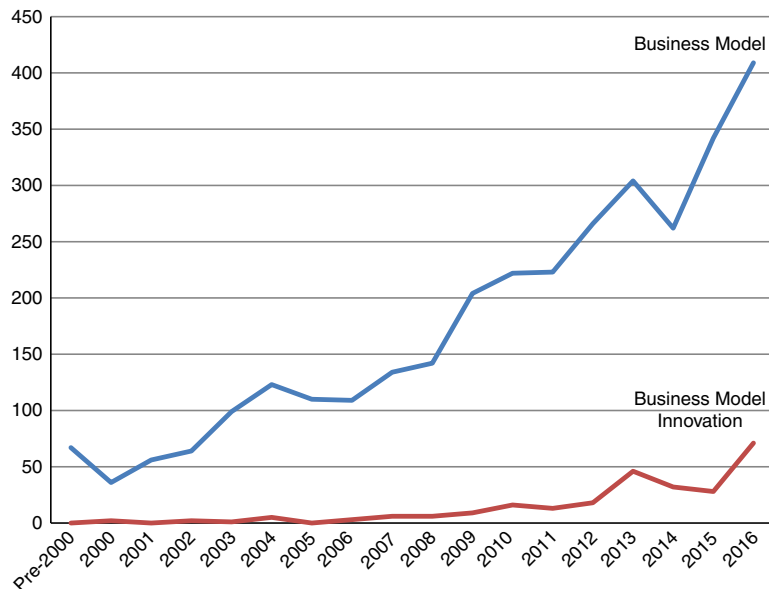
Firms pursue business model innovation by exploring new ways to define value proposition, create and capture value for customers, suppliers and partners (Gambardella and McGahan, 2010; Teece, 2010; Bock *et al.*, 2012; Casadesus-Masanell and Zhu, 2013). An extensive body of the literature asserts that innovation in business models is of vital importance to firm survival, business performance and as a source of competitive advantage (Demil and Lecocq, 2010; Chesbrough, 2010; Amit and Zott, 2012; Baden-Fuller and Haefliger, 2013; Casadesus-Masanell and Zhu, 2013). It is starting to attract a growing attention, given the increasing opportunities for new business models enabled by changing customer expectations, technological advances and deregulation (Casadesus-Masanell and Llanes, 2011; Casadesus-Masanell and Zhu, 2013). This is evident from the recent scholarly outputs (Figure 1). Thus, it is essential to comprehend this literature and uncover where alternative business models can be explored.

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Figure 1.
The evolution
of business
model literature
(pre-2000 to 2016)



Note: EBSCOhost research databases were used to search for papers in scholarly (peer-reviewed) journals

Conflicting approaches exist in the literature on how firms change their business models. One approach suggests that alternative business models can be explored through an evolutionary process of incremental changes to business model elements (e.g. Demil and Lecocq, 2010; Dunford *et al.*, 2010; Amit and Zott, 2012; Landau *et al.*, 2016; Velu, 2016). The other approach, mainly practice-oriented, advocates that innovative business models can be developed through a revolutionary process by replacing existing business models (e.g. Bock *et al.*, 2012; Iansiti and Lakhani, 2014). The fragmentation of prior research is due to the variety of disciplinary and theoretical foundations through which business model innovation is examined. Scholars have drawn on perspectives from entrepreneurship (e.g. George and Bock, 2011), information systems (e.g. Al-debei and Avison, 2010), innovation management (e.g. Dmitriev *et al.*, 2014), marketing (e.g. Sorescu *et al.*, 2011) and strategy (e.g. Demil and Lecocq, 2010). Also, this fragmentation is deepened by focusing on different types of business models in different industries. Studies have explored different types of business models such as digital business models (e.g. Weill and Woerner, 2013), service business models (e.g. Kastalli *et al.*, 2013), social business models (e.g. Hlady-Rispal and Servantie, 2016) and sustainability-driven business models (Esslinger, 2011). Besides, studies have examined different industries such as airline (Lange *et al.*, 2015), manufacturing (Landau *et al.*, 2016), newspaper (Karimi and Walter, 2016), retail (Brea-Solis *et al.*, 2015) and telemedicine (Peters *et al.*, 2015).

Since the first comprehensive review of business model literature was carried out by Zott *et al.* (2011), several reviews were published recently (as highlighted in Table I). Our review builds on and extends the extant literature in at least three ways. First, unlike previous reviews that mainly focused on the general construct of “Business Model” (George and Bock, 2011; Zott *et al.*, 2011; Wirtz *et al.*, 2016), our review focuses on uncovering how firms change their existing business model(s) by including terms that reflect business model innovation, namely, value proposition, value creation and value capture. Second, previous reviews do not provide a clear

	Zott <i>et al.</i> (2011)	George and Bock (2011)	Schneider and Spieth (2013)	Klang <i>et al.</i> (2014)	Wirtz <i>et al.</i> (2016)	Our review
Term(s)	Business model	Business model	Business model innovation	Business model(s)	Business model	Business model(s); innovation; value proposition; value creation; value capture
Period	1975–2009	Up to 1 December 2008	1981–May 2012	Up to January/ February 2010	1965–2013	2010–2016
Search	Title; keywords	All-text topics	Keyword	Title; abstract; keywords	Title	Title; abstract; keywords
Databases	Business source complete	EBSCO business source premiere	na	na	EBSCO business source complete	EBSCO business complete; ABI/ INFORM; JSTOR; ScinceDirect
Type	Peer- reviewed papers; books; reports; magazines	Papers; websites; unpublished manuscripts	Peer- reviewed journals; recent working papers	Papers; reviews; editorials; books; reviewed publications	Papers in peer-reviewed and non-peer- reviewed journals	Peer-reviewed papers with the exception of <i>Harvard Business Review</i> ; top-rated papers
Sample	103	108	35	54	681	219

Table I.
Previous reviews of
business model
literature

answer as to how firms change their business models. Our review aims to provide a clear guidance on how firms carry out business model innovation by synthesising the different perspectives existing in the literature. Third, compared to recent reviews on business model innovation (Schneider and Spieth, 2013; Spieth *et al.*, 2014), which have touched lightly on some innovation aspects such as streams and motivations of business model innovation research, our review will uncover the innovation areas where alternative business models can be explored. Taking Teece's (2010) suggestion, "A helpful analytic approach for management is likely to involve systematic deconstruction/unpacking of existing business models, and an evaluation of each element with an idea toward refinement or replacement" (p. 188), this paper aims to develop a theoretical framework of business model innovation.

Our review first explains the scope and the process of the literature review. This is followed by a synthesis of the findings of the review into a theoretical framework of business model innovation. Finally, avenues for future research will be discussed in relation to the approaches, degree and mechanisms of business model innovation.

2. Scope and method of the literature review

Given the diverse body of business models literature, a systematic literature review was carried out to minimise research bias (Transfield *et al.*, 2003). Compared to the previous business model literature, our review criteria are summarised in Table I. The journal papers considered were published between January 2010 and December 2016. As highlighted in Figure 1, most contributions in this field have been issued within this period since previous developments in the literature were comprehensively reviewed up to the end of 2009 (Zott *et al.*, 2011). Using four databases (EBSCO Business Complete, ABI/INFORM, JSTOR and ScienceDirect), we searched peer-reviewed papers with terms such as business model(s), innovation value proposition, value creation and value capture appearing in the title, abstract or subject terms. As a result, 8,642 peer-reviewed papers were obtained.

Studies were included in our review if they specifically address business models and were top-rated according to The UK Association of Business Schools list (ABS, 2010). This rating has been used not only because it takes into account the journal “Impact Factor” as a measure for journal quality, but also uses in conjunction other measures making it one of the most comprehensive journal ratings. By applying these criteria, 1,682 entries were retrieved from 122 journals. By excluding duplications, 831 papers were identified. As *Harvard Business Review* is not listed among the peer-reviewed journals in any of the chosen databases and was included in the ABS list, we used the earlier criteria and found 112 additional entries. The reviewed papers and their subject fields are highlighted in Table II. Since the focus of this paper is on business model innovation, we selected studies that discuss value proposition, value creation and value capture as sub-themes. This is not only because the definition of business model innovation mentioned earlier spans all three sub-themes, but also because all three sub-themes have been included in recent studies (e.g. Landau *et al.*, 2016; Velu and Jacob, 2014). To confirm whether the papers addressed business model innovation, we examined the main body of the papers to ensure they were properly coded and classified. At the end of the process, 219 papers were included in this review. Table III lists the source of our sample.

The authors reviewed the 219 papers using a protocol that included areas of innovation (i.e. components, elements, and activities), theoretical perspectives and key findings. In order to identify the main themes of business model innovation research, all papers were coded in relation to our research focus as to where alternative business models can be explored (i.e. value proposition, value creation and value capture). Coding was cross checked among the authors on a random sample suggesting high accuracy between them. Having compared and discussed the results, the authors were able to identify the main themes.

3. Prior conceptualisations of business model innovation

Some scholars have articulated the need to build the business model innovation on a more solid theoretical ground (Sosna *et al.*, 2010; George and Bock, 2011). Although many studies

Table II.
Reviewed papers and
their subject fields

Subject fields	No. of journals	Number of papers/Year								Total no. of papers	% of papers
		2010	2011	2012	2013	2014	2015	2016			
Marketing	14	16	23	34	36	23	26	76	234	24.8	
General management	12	18	32	20	33	27	43	47	220	23.3	
Information management	13	8	6	13	14	21	13	20	95	10.1	
Operations, technology and management	8	6	9	10	14	14	11	19	83	8.8	
Strategic management	2	25	8	3	17	7	3	19	82	8.7	
Innovation	3	4	5	5	5	18	5	13	55	5.8	
Entrepreneurship and small business management	6	9	4	3	13	3	14	7	53	5.6	
Business ethics and governance	2	11	5	4	7	6	5	6	44	4.7	
Business and area studies	5	5	2	4	3	2	5	5	26	2.8	
Operations research and management science	5	4	6	2	4	2	2	5	25	2.7	
Organisation studies	4	3	2	4	2	1	2	2	16	1.7	
Human resources management and employment studies	2	2	—	1	3	—	1	2	9	1.0	
International business and area studies	—	—	—	—	—	—	—	1	1	0.1	
Total	76	111	102	103	151	124	130	222	943	100.0	

Table III.

Source of our sample

Journals	Number of papers	Weighting (%)
<i>Harvard Business Review</i>	42	19.2
<i>Long Range Planning</i>	28	12.8
<i>Industrial Marketing Management</i>	21	9.6
<i>R&D Management</i>	16	7.3
<i>MIT Sloan Management Review</i>	15	6.8
<i>Journal of Business Research</i>	11	5.0
<i>California Management Review</i>	10	4.6
<i>Strategic Entrepreneurship Journal</i>	8	3.7
<i>Technovation</i>	6	2.7
Others	62	28.3
Total	219	100

are not explicitly theory-based, some studies partially used well-established theories such as the resource-based view (e.g. Al-Debei and Avison, 2010) and transaction cost economics (e.g. DaSilva and Trkman, 2014) to conceptualise business model innovation. Other theories such as activity systems perspective, dynamic capabilities and practice theory have been used to help answer the question of how firms change their existing business models.

Using the activity systems perspective, Zott and Amit (2010) demonstrated how innovative business models can be developed through the design themes that describe the source of value creation (novelty, lock-in, complementarities and efficiency) and design elements that describe the architecture (content, structure and governance). This work, however, overlooks value capture which limits the explanation of the advocated system's view (holistic). Moreover, Chatterjee (2013) used this perspective to reveal that firms can design innovative business models that translate value capture logic to core objectives, which can be delivered through the activity system.

Dynamic capability perspective frames business model innovation as an initial experiment followed by continuous revision, adaptation and fine-tuning based on trial-and-error learning (Sosna *et al.*, 2010). Using this perspective, Demil and Lecocq (2010) showed that "dynamic consistency" is a capability that allows firms to sustain their performance while innovating their business models through voluntary and emergent changes. Also, Mezger (2014) conceptualised business model innovation as a distinct dynamic capability. He argued that this capability is the firm's capacity to sense opportunities, seize them through the development of valuable and unique business models, and accordingly reconfigure the firms' competences and resources. Using aspects of practice theory, Mason and Spring (2011) looked at business model innovation in the recorded sound industry and found that it can be achieved through various combinations of managerial practices.

Static and transformational approaches have been used to depict business models (Demil and Lecocq, 2010). The former refers to viewing business models as constituting core elements that influence business performance at a particular point in time. This approach offers a snapshot of the business model elements and how they are assembled, which can help in understanding and communicating a business model (e.g. Eyring *et al.*, 2011; Mason and Spring, 2011; Yunus *et al.*, 2010). The latter, however, focuses on innovation and how to address the changes in business models over time (e.g. Sinfield *et al.*, 2012; Girotra and Netessine, 2014; Landau *et al.*, 2016). Some researchers have identified the core elements of business models *ex ante* (e.g. Demil and Lecocq, 2010; Wu *et al.*, 2010; Huarng, 2013; Dmitriev *et al.*, 2014), while others argued that considering *a priori* elements can be restrictive (e.g. Casadesus-Masanell and Ricart, 2010). Unsurprisingly, some researchers found a middle ground where elements are loosely defined allowing flexibility in depicting business models (e.g. Zott and Amit, 2010; Sinfield *et al.*, 2012; Kiron *et al.*, 2013).

Prior to 2010, conceptual frameworks focused on the business model concept in general (e.g. Chesbrough and Rosenbloom, 2002; Osterwalder *et al.*, 2005; Shafer *et al.*, 2005) apart from Johnson *et al.*'s (2008), which is one of the early contributions to business model innovation. To determine whether a change in existing business model is necessary, Johnson *et al.* (2008) suggested three steps: "Identify an important unmet job a target customer needs done; blueprint a model that can accomplish that job profitably for a price the customer is willing to pay; and carefully implement and evolve the model by testing essential assumptions and adjusting as you learn" (Eyring *et al.*, 2011, p. 90). Although several frameworks have been developed since then, our understanding of business model innovation is still limited due to the static nature of the majority of these frameworks. Some representations ignore the elements and/or activities where alternative business models can be explored (e.g. Sinfield *et al.*, 2012; Chatterjee, 2013; Huarng, 2013; Morris *et al.*, 2013; Dmitriev *et al.*, 2014; Girotra and Netessine, 2014). Other frameworks ignore value proposition (e.g. Zott and Amit, 2010), ignore value creation (e.g. Dmitriev *et al.*, 2014; Michel, 2014) and/or ignore value capture (e.g. Mason and Spring, 2011; Sorescu *et al.*, 2011; Storbacka, 2011). Some conceptualisations do not identify who is responsible for the innovation (e.g. Casadesus-Masanell and Ricart, 2010; Sinfield *et al.*, 2012; Chatterjee, 2013; Kiron *et al.*, 2013). Synthesising the different contributions into a theoretical framework of business model innovation will enable a better understanding of how firms undertake business model innovation.

4. Business model innovation framework

Our framework (Figure 2) integrates all the elements where alternative business models can be explored. This framework does not claim that the listed elements are definitive for high-performing business models, but is an attempt to outline the elements associated with business model innovation. This framework builds on the previous work of



Figure 2.
Business model
innovation framework

Johnson *et al.* (2008) and Zott and Amit (2010) by signifying the elements associated with business model innovation. Unlike previous frameworks that mainly consider the constituting elements of business models, this framework focuses on areas of innovation where alternative business models can be explored. Moreover, this is not a static view of the constituting elements of a business model, but rather a view enabling firms to explore alternative business models by continually refining these elements. Arrows in the framework indicate the continuous interaction of business model elements. This framework consists of 4 areas of innovation and 16 elements (more details are shown in Table IV). Each will be discussed below.

4.1 Value proposition

The first area of innovation refers to elements associated with answering the “Why” questions. While most of the previously established models in the literature include at least one of the value proposition elements (e.g. Brea-Solis *et al.*, 2015; Christensen *et al.*, 2016), other frameworks included two elements (e.g. Dahan *et al.*, 2010; Cortimiglia *et al.*, 2016) and three elements (e.g. Eyring *et al.*, 2011; Sinfield *et al.*, 2012). These elements include rethinking what a company sells, exploring new customer needs, acquiring target customers and determining whether the benefits offered are perceived by customers. Modern organisations are highly concerned with innovation relating to value proposition in order to attract and retain a large portion of their customer base (Al-Debei and Avison, 2010). Developing new business models usually starts with articulating a new customer value proposition (Eyring *et al.*, 2011). According to Sinfield *et al.* (2012), firms are encouraged to explore various alternatives of core offering in more depth by examining type of offering (product or service), its features (custom or off-the-shelf), offered benefits (tangible or intangible), brand (generic or branded) and lifetime of the offering (consumable or durable).

In order to exploit the “middle market” in emerging economies, Eyring *et al.* (2011) suggested that companies need to design new business models that aim to meet unsatisfied needs and evolve these models by continually testing assumptions and making adjustments. To uncover unmet needs, Eyring *et al.* (2011) suggested answering four questions: what are customers doing with the offering? What alternative offerings consumers buy? What jobs consumers are satisfying poorly? and what consumers are trying to accomplish with existing offerings? Furthermore, Baden-Fuller and Haefliger (2013) made a distinction between customers and users in two-sided platforms, where users search for products online, and customers (firms) place ads to attract users. They also made a distinction between “pre-designed (scale) based offerings” and “project based offerings”. While the former focuses on “one-size-fits-all”, the latter focuses on specific client solving specific problem.

Established firms entering emerging markets should identify unmet needs “the job to be done” rather than extending their geographical base for existing offerings (Eyring *et al.*, 2011). Because customers in these markets cannot afford the cheapest of the high-end offerings, firms with innovative business models that meet these customers’ needs affordably will have opportunities for growth (Eyring *et al.*, 2011). Moreover, secondary business model innovation has been advocated by Wu *et al.* (2010) as a way for latecomer firms to create and capture value from disruptive technologies in emerging markets. This can be achieved through tailoring the original business model to fit price-sensitive mass customers by articulating a value proposition that is attractive for local customers.

4.2 Operational value

The second area of innovation focuses on elements associated with answering the “What” questions. Many of the established frameworks included either one element (e.g. Sinfield *et al.*, 2012; Taran *et al.*, 2015), two elements (e.g. Mason and Spring, 2011;

Areas of innovation	Elements	Relevant questions	Variables	Studies	
Value proposition (Why?)	Core offering	Why our products/ services?	Value proposition	Al-Debei and Avison (2010)	
			Value proposition	Dahan <i>et al.</i> (2010)	
			Value proposition	Demil and Lecocq (2010)	
			Value proposition	Wu <i>et al.</i> (2010)	
			Value proposition	Yunus <i>et al.</i> (2010)	
			Type of offering	Eyring <i>et al.</i> (2011)	
			Offering	Rajala <i>et al.</i> (2012)	
			Offering	Sinfield <i>et al.</i> (2012)	
			Product/Service offering	Kiron <i>et al.</i> (2013)	
			Customer value proposition	Dmitriev <i>et al.</i> (2014)	
			Change in offering	Sinkovics <i>et al.</i> (2014)	
			Product selection	Brea-Solis <i>et al.</i> (2015)	
			Value propositions	Kohler (2015)	
			Value proposition	Taran <i>et al.</i> (2015)	
			Offering	Landau, <i>et al.</i> (2016)	
			Value proposition	Christensen <i>et al.</i> (2016)	
			Value proposition	Cortimiglia <i>et al.</i> (2016)	
			Value proposition/Offering	Hartmann <i>et al.</i> (2016)	
			Value proposition	Mehrizi and Lashkarbolouki (2016)	
			Customer needs	Why customers purchase our products/ services?	Market offering
	Customer needs	Eyring <i>et al.</i> (2011)			
	Perceived needs	Amit and Zott (2012)			
	Customer need	Sinfield <i>et al.</i> (2012)			
	Customer engagement	Baden-Fuller and Haefliger (2013)			
	Target customers	Why target the current segment(s)?	Target customers	Dahan <i>et al.</i> (2010)	
			Target customers	Sinfield <i>et al.</i> (2012)	
			Customer identification	Baden-Fuller and Haefliger (2013)	
			Target segments	Kiron <i>et al.</i> (2013)	
			Target market Segment(s)	Dmitriev <i>et al.</i> (2014)	
			Target customers	Sinkovics <i>et al.</i> (2014)	
Customer segments			Kohler (2015)		
Target customers			Taran <i>et al.</i> (2015)		
Target customers			Landau, <i>et al.</i> (2016)		
Value delivery			Cortimiglia <i>et al.</i> (2016)		
Market/Customer segment			Hartmann <i>et al.</i> (2016)		
Customer segment			Mehrizi and Lashkarbolouki (2016)		
Customer perceived value			Why customers choose us?	Customers	Wirtz <i>et al.</i> (2016)
				Meeting local needs	Wu <i>et al.</i> (2010)
				Affordability	Eyring <i>et al.</i> (2011)
	Satisfy perceived needs	Amit and Zott (2012)			
	Key assets	What assets do we need?		Key resources	Eyring <i>et al.</i> (2011)
				Resources	Rajala <i>et al.</i> (2012)
				Key assets	Dmitriev <i>et al.</i> (2014)
				Key resources	Kohler (2015)
				Resources	Christensen <i>et al.</i> (2016)
				Value creation	Cortimiglia <i>et al.</i> (2016)
Key resources			Hartmann <i>et al.</i> (2016)		
Key resources			Mehrizi and Lashkarbolouki (2016)		

Table IV.
Business model
innovation areas
and elements

(continued)

Areas of innovation	Elements	Relevant questions	Variables	Studies
Human capital (Who?)	Key process	What processes do we require?	Resources Key processes Technologies Investment in technology Processes Value creation	Wirtz <i>et al.</i> (2016) Eyring <i>et al.</i> (2011) Mason and Spring (2011) Brea-Solis <i>et al.</i> (2015) Christensen <i>et al.</i> (2016) Cortimiglia <i>et al.</i> (2016)
	Partners network	What relationships should we consider?	Value network Value network Value network Network architecture Relationships Value chain linkages Partners' network Partner network Partner network Key partners Partner network Value networking Supply chain	Al-Debei and Avison (2010) Demil and Lecocq (2010) Wu <i>et al.</i> (2010) Mason and Spring (2011) Rajala <i>et al.</i> (2012) Baden-Fuller and Haefliger (2013) Dmitriev <i>et al.</i> (2014) Sinkovics <i>et al.</i> (2014) Taran <i>et al.</i> (2015) Kohler (2015) Peters <i>et al.</i> (2015) Cortimiglia <i>et al.</i> (2016) Mehrizi and Lashkarbolouki (2016)
	Distribution channels	What channels can deliver our products/services?	Network Distribution channel Channel Customer access Distribution channel Channels Sales channels	Wirtz <i>et al.</i> (2016) Wu <i>et al.</i> (2010) Eyring <i>et al.</i> (2011) Sinfield <i>et al.</i> (2012) Sinkovics <i>et al.</i> (2014) Kohler (2015) Mehrizi and Lashkarbolouki (2016)
	Organisational learning	Who should be engaged in knowledge transfer activities?	Value delivery Double loop learning Experimentation process Human resource practices	Cortimiglia <i>et al.</i> (2016) Yunus <i>et al.</i> (2010) Sinfield <i>et al.</i> (2012) Brea-Solis <i>et al.</i> (2015)
	Skills and competencies	Who should execute specific activities?	Resources and competencies Core competency Resources and competencies Core internal competencies Core competency Core competences Domain-specific know-how	Al-Debei and Avison (2010) Wu <i>et al.</i> (2010) Demil and Lecocq (2010) Morris <i>et al.</i> (2013) Sinkovics <i>et al.</i> (2014) Taran <i>et al.</i> (2015) Peters <i>et al.</i> (2015)
	Incentives	Who should be reward?	Incentives Human resource practices Crowd rewards	Sorescu <i>et al.</i> (2011) Brea-Solis <i>et al.</i> (2015) Kohler (2015)
	Training	Who requires development to carry out specific activities?	Human resource practices	Brea-Solis <i>et al.</i> (2015)
	Revenue streams	How do we generate revenue?	Value finance Volume and structure of revenues	Al-Debei and Avison (2010) Demil and Lecocq (2010)

(continued)

Table IV.

Areas of innovation	Elements	Relevant questions	Variables	Studies
			Revenue model	Wu <i>et al.</i> (2010)
			Sales revenues	Yunus <i>et al.</i> (2010)
			Revenue model	Eyring <i>et al.</i> (2011)
			Revenue model	Rajala <i>et al.</i> (2012)
			Monetisation	Baden-Fuller and Haefliger (2013)
			Revenue model	Kiron <i>et al.</i> (2013)
			Revenue	Huang <i>et al.</i> (2013)
			Revenue drivers	Morris <i>et al.</i> (2013)
			Revenue model	Dmitriev <i>et al.</i> (2014)
			Revenue streams	Kohler (2015)
			Type of revenue	Peters <i>et al.</i> (2015)
			Value appropriation	Cortimiglia <i>et al.</i> (2016)
			Revenue stream	Hartmann <i>et al.</i> (2016)
			Revenue model	Mehrizi and Lashkarbolouki (2016)
	Cost structure	How do we cost our products/ services?	Revenue	Landau, <i>et al.</i> (2016)
			Revenues	Wirtz <i>et al.</i> (2016)
			Value finance	Al-Debei and Avison (2010)
			Volume and structure of costs	Demil and Lecocq (2010)
			Cost structure	Wu <i>et al.</i> (2010)
			Cost structure	Yunus <i>et al.</i> (2010)
			Cost structure	Eyring <i>et al.</i> (2011)
			Cost	Huang <i>et al.</i> (2013)
			Cost model	Kiron <i>et al.</i> (2013)
			Pricing approach	Morris <i>et al.</i> (2013)
			Cost structure	Dmitriev <i>et al.</i> (2014)
			Cost structure	Sinkovics <i>et al.</i> (2014)
			Cost consciousness	Brea-Solis <i>et al.</i> (2015)
			Company cost structure	Kohler (2015)
			Cost drivers	Peters <i>et al.</i> (2015)
			Value appropriation	Cortimiglia <i>et al.</i> (2016)
			Cost structure	Hartmann <i>et al.</i> (2016)
			Costs	Landau, <i>et al.</i> (2016)
			Cost structure	Mehrizi and Lashkarbolouki (2016)
	Cash flow	How should we manage cash flow?	Finances	Wirtz <i>et al.</i> (2016)
			Capital employed	Yunus <i>et al.</i> (2010)
	Margins	How much surplus can we make?	Monetisation	Baden-Fuller and Haefliger (2013)
			Margin	Demil and Lecocq (2010)
			Profit formula	Wu <i>et al.</i> (2010)
			Economic profit equation	Yunus <i>et al.</i> (2010)
			Profit formula	Eyring <i>et al.</i> (2011)
			Profit model	Sinfield <i>et al.</i> (2012)
			Profit	Huang <i>et al.</i> (2013)
			Margins	Morris <i>et al.</i> (2013)
			Estimation of profit potential	Dmitriev <i>et al.</i> (2014)
			Profit formula	Taran <i>et al.</i> (2015)
			Profit formula	Christensen <i>et al.</i> (2016)

Table IV.

Dmitriev *et al.*, 2014). However, very few included three or more elements (e.g. Mehrizi and Lashkarbolouki, 2016; Cortimiglia *et al.*, 2016). These elements include configuring key assets and sequencing activities to deliver the value proposition, exposing the various means by which a company reaches out to customers, and establishing links with key partners and suppliers. Focusing on value creation, Zott and Amit (2010) argued that business model innovation can be achieved through reorganising activities to reduce transaction costs. However, Al-Debei and Avison (2010) argued that innovation relating to this dimension can be achieved through resource configuration, which demonstrates a firm's ability to integrate various assets in a way that delivers its value proposition. Cavalcante *et al.* (2011) proposed four ways to change business models: business model creation, extension, revision and termination by creating or adding new processes, and changing or terminating existing processes.

Western firms have had difficulty competing in emerging markets due to importing their existing business models with unchanged operating model (Eyring *et al.*, 2011). Alternative business models can be uncovered when firms explore the different roles they might play in the industry value chain (Sinfield *et al.*, 2012). Al-Debei and Avison (2010) suggested achieving this through answering questions such as: what is the position of our firm in the value system? and what mode of collaboration (open or close) would we choose to reach out in a business network? Dahan *et al.* (2010) found cross-sector partnerships as a way to co-create new multi-organisational business models. They argued that multinational enterprises (MNEs) can collaborate with nongovernmental organisations (NGOs) to create products/or services that neither can create on their own. Collaboration allows access to resources that firms would otherwise need to solely develop or purchase (Yunus *et al.*, 2010). According to Wu *et al.* (2010), secondary business model innovation can be achieved when latecomer firms fully utilise strategic partners' complementary assets to overcome their latecomer disadvantages and build a unique value network specific to emerging economies context.

4.3 Human capital

The third area of innovation refers to elements associated with answering the "Who" questions. Most of the established frameworks in this field tend to focus less on human capital and include one element at most (e.g. Wu *et al.*, 2010; Kohler, 2015). However, our framework highlights four elements, which include experimenting with new ways of doing business, tapping into the skills and competencies needed for the new business model through motivating and involving individuals in the innovation process. According to Belenzon and Schankerman (2015), "the ability to tap into a pool of talent is strongly related to the specific business model chosen by managers" (p. 795). They claimed that managers can strategically influence individuals' contributions and their impact on project performance.

Organisational learning can be maximised through continuous experimentation and making changes when actions result in failure (Yunus *et al.*, 2010). Challenging and questioning the existing rules and assumptions and imagining new ways of doing business will help develop new business models. Another essential element of business model design is governance, which refers to who performs the activities (Zott and Amit, 2010). According to Sorescu *et al.* (2011), innovation in retail business models can occur as a result of changes in the level of participation by actors engaged in performing the activities. An essential element of retailing governance is the incentive structure or the mechanisms that motivate those involved in carrying out their roles to meet customer demands (Sorescu *et al.*, 2011). For example, discount retailers tend to establish different compensation and incentive policies (Brea-Solis *et al.*, 2015). Revising the incentive system can have a major impact on new ventures' performance by aligning

organisational goals at each stage of growth (Roberge, 2015). Zott and Amit (2010) argued that alternative business models can be explored through adopting innovative governance or changing one or more parties that perform any activities. Sinfield *et al.* (2012) suggested that business model innovation only requires time from a small team over a short period of time to move a company beyond incremental improvements and generate new opportunities for growth. This is supported by Michel's (2014) finding that cross-functional teams were able to quickly achieve business model innovation in workshops through deriving new ways to capture value.

4.4 Financial value

The final area of innovation focuses on elements associated with answering the "How" questions. Previously developed frameworks tend to prioritise this area of innovation by three elements (e.g. Eyring *et al.*, 2011; Huang *et al.*, 2013), and in one instance four elements (e.g. Yunus *et al.*, 2010). These elements include activities linked with how to capture value through revenue streams, changing the price-setting mechanisms, and assessing the financial viability and profitability of a business. According to Demil and Lecocq (2010), changes in cost and/or revenue structures are the consequences of both continuous and radical changes. They also argued that costs relate to different activities run by organisations to acquire, integrate, combine or develop resources. Michel (2014) suggested that alternative business models can be explored through: changing the price-setting mechanism, changing the payer, and changing the price carrier. Different innovation forms are associated with each of these categories.

Business model innovation can be achieved through exploring new ways to generate cash flows (Sorescu *et al.*, 2011), where the organisation has to consider (and potentially change) when the money is collected: prior to the sale, at the point of sale, or after the sale (Baden-Fuller and Haefliger, 2013). Furthermore, Demil and Lecocq (2010) suggested that changes in business models affect margins. This is apparent in the retail business models, which generate more profit through business model innovation compared to other types of innovation (Sorescu *et al.*, 2011).

5. Ways to change business models

From reviewing the recent developments in the business model literature, alternative business models can be explored through modifying a single business model element, altering multiple elements simultaneously and/or changing the interactions between elements of a business model.

Changing one of the business model elements (i.e. content, structure or governance) is enough to achieve business model innovation (Amit and Zott, 2012). This means that firms can have a new activity system by performing only one new activity. However, Amit and Zott (2012) clearly outlined a systemic view of business models which entails a holistic change. This is evident from Demil and Lecocq's (2010) work suggesting that the study of business model innovation should not focus on isolated activities since changing a core element will not only impact other elements but also the interactions between these elements.

Another way to change business models is through altering multiple business model elements simultaneously. Kiron *et al.* (2013) found that companies combining target customers with value chain innovations and changing one or two other elements of their business models tend to profit from their sustainability activities. They also found that firms changing three to four elements of their business models tend to profit more from their sustainability activities compared to those changing only one element. Moreover, Dahan *et al.* (2010) found that a new business model was developed as a result of MNEs and NGOs collaboration by redefining value proposition, target customers, governance of activities and

distribution channels. Companies can explore multiple combinations by listing different business model options they could undertake (desirable, discussable and unthinkable) and evaluate new combinations that would not have been considered otherwise (Sinfield *et al.*, 2012).

Changing business models is argued to be demanding as it requires a systemic and holistic view (Amit and Zott, 2012) by considering the relationships between core business model elements (Demil and Lecocq, 2010). As mentioned earlier, changing one element will not only impact other elements but also the interactions between these elements. A firm's resources and competencies, value proposition and organisational system are continuously interacting and this will in turn impact business performance either positively or negatively (Demil and Lecocq, 2010). According to Zott and Amit (2010), innovative business models can be developed through linking activities in a novel way that generates more value. They argued that alternative business models can be explored by configuring business model design elements (e.g. governance) and connecting them to distinct themes (e.g. novelty). Supporting this, Eyring *et al.* (2011) suggested that core business model elements need to be integrated in order to create and capture value (Eyring *et al.*, 2011).

6. Discussion and future research directions

From the above synthesis of the recent development in the literature, several gaps remain unfilled. To advance the literature, possible future research directions will be discussed in relation to approaches, degrees and mechanisms of business model innovation.

6.1 *Approaches of business model innovation*

Experimentation, open innovation and disruption have been advocated as approaches to business model innovation. Experimentation has been emphasised as a way to exploit opportunities and develop alternative business models before committing additional investments (McGrath, 2010). Several approaches have been developed to assist in business model experimentation including mapping approach, discovery-driven planning and trial-and-error learning (Chesbrough, 2010; McGrath, 2010; Sosna *et al.*, 2010; Andries and Debackere, 2013). Little is known about the effectiveness of these approaches. It will be worth investigating which elements of the business model innovation framework are more susceptible to experimentation and which elements should be held unchanged. Although business model innovation tends to be characterised with failure (Christensen *et al.*, 2016), not much has been established on failing business models. It is interesting to explore how firms determine a failing business model and what organisational processes exist (if any) to evaluate and discard these failed business models. Empirical studies could examine which elements of business model innovation framework are associated with failing business models.

Another way to develop alternative business models is through open innovation. Although different categories of open business models have been identified by researchers (e.g. Frankenberger *et al.*, 2014; Taran *et al.*, 2015; Kortmann and Piller, 2016), their effectiveness is yet to be established. Further research is needed to examine when can a firm open and/or close element(s) of the business model innovation framework. Future studies could also examine the characteristics of open and/or close business models.

In responding to disruptive business models, how companies extend their existing business model, introduce additional business model(s) and/or replace their existing business model altogether remains underexplored. Future research is needed to unravel the strategies deployed by firms to extend their existing business models as a response to disruptive business models. In introducing additional business models, Markides (2013) suggested that a company will be presented with several options to manage the two

businesses at the same time: create a completely separate business unit, integrate the two business models from the beginning or integrate the second business model after a certain period of time. Finding the balance between separation and integration is of vital importance. Further research could identify which of these choices are most common among successful firms introducing additional business models, how is the balance between integration and separation achieved, and which choice(s) prove more profitable. Moreover, very little is known on how firms replace their existing business model. Longitudinal studies could provide insights into how a firm adopts an alternative model and discard the old business model over time. It may also be worth examining the factors associated with the adoption of business model innovation as a response to disruptive business models. Moreover, new developments in digital technologies such as blockchain, Internet of Things and artificial intelligence are disrupting existing business models and providing firms with alternative avenues to create new business models. Thus far, very little is known on digital business models, the nature of their disruption, and how firms create digital business models and make them disruptive. Future research is needed to fill these important gaps in our knowledge.

6.2 Degrees of business model innovation

Business models can be developed through varying degrees of innovation from an evolutionary process of continuous fine-tuning to a revolutionary process of replacing existing business models. Recent research shows that survival of firms is dependent on the degree of their business model innovation (Velu, 2015, 2016). This review classifies these degrees of innovation into modifying a single element, altering multiple elements simultaneously and/or changing the interactions between elements of the business model innovation framework.

In changing a single element, further research is needed to examine which business model element(s) is (are) associated with business model innovation. It is not clear whether firms intentionally make changes to a single element when carrying out business model innovation or stumble at it when experimenting with new ways of doing things. It may also be worth investigating the entry (or starting) points in the innovation process. There is no consensus in the literature on which element do companies start with when carrying out their business model innovation. While some studies suggest starting with the value proposition (Eyring *et al.*, 2011; Landau *et al.*, 2016), others suggest starting the innovation process with identifying risks in the value chain (Girotra and Netessine, 2011). Dmitriev *et al.* (2014) suggested two entry points, namely, value proposition and target customers. In commercialising innovations, the former refers to technology-push innovation while the latter refers to market-pull innovation. Also, it is not clear whether the entry point is the same as the single element associated with changing the business model. Further research can explore the different paths to business model innovation by identifying the entry point and subsequent changes needed to achieve business model innovation.

There is little guidance in the literature on how firms change multiple business model elements simultaneously. Landau *et al.* (2016) claimed that firms entering emerging markets tend to focus on adjusting specific business model components. It is unclear which elements need configuring, combining and/or integrating to achieve a company's value proposition. Furthermore, the question of which elements can be "bought" on the market or internally "implemented" and their interplay remains unanswered (DaSilva and Trkman, 2014). Casadesus-Masanell and Ricart (2010) argued that "[...] there is (as yet) no agreement as to the distinctive features of superior business models" (p. 196). Further research is needed to explore these distinctive elements of high-performing business models.

In changing the interactions between business model elements, further research is needed to explore how these elements are linked and what interactions' changes are necessary to achieve business model innovation. Moreover, the question of how firms sequence these elements remains poorly understood. Future research can explore the synergies created over time between these elements. According to Dmitriev *et al.* (2014), we need to improve our understanding of the connective mechanisms and dynamics involved in business model development. More work is needed to explore the different modalities of interdependencies among these elements and empirically testing such interdependencies and their effect on business performance (Sorescu *et al.*, 2011).

It is surprising that the link between business model innovation and organisational performance has rarely been examined. Changing business models has been found to negatively influence business performance even if it is temporary (McNamara *et al.*, 2013; Visnjic *et al.*, 2016). Contrary to this, evidence show that modifying business models is positively associated with organisational performance (Cucculelli and Bettinelli, 2015). Empirical research is needed to operationalise the various degrees of innovation in business models and examine their link to organisational performance. Longitudinal studies can also be used to explore this association since it may be the case that business model innovation has a negative influence on performance in the short run and that may change subsequently. Moreover, it is not clear whether high-performing firms change their business models or innovation in business models is a result from superior performance (Sorescu *et al.*, 2011). Further studies are needed to determine the direction of causality. Another link that is worth exploring is business model innovation and social value, which has only been explored in a few studies looking at social business models (e.g. Yunus *et al.*, 2010; Wilson and Post, 2013). Further research is needed to examine this link and possibly examine both financial and non-financial business performance.

6.3 Mechanisms of business model innovation

Although we know more about how firms define value proposition, create and capture value (Landau *et al.*, 2016; Velu and Jacob, 2014), what remains as a blind spot is the mechanism of business model innovation. This is due to the fact that much of the literature seems to focus on value creation. To better understand the various mechanisms of business model innovation, future studies must integrate value proposition, value creation and value capture elements. Empirical studies could use the business model innovation framework to examine the various mechanisms of business model innovation. Also, the literature lacks the integration of internal and external perspectives of business model innovation. Very few studies look at the external drivers of business model innovation and the associated internal changes. The external drivers are referred to as "emerging changes", which are usually beyond manager's control (Demil and Lecocq, 2010). Inconclusive findings exist as to how firms develop innovative business models in response to changes in the external environment. Future studies could examine the external factors associated with the changes in the business model innovation framework. Active and reactive responses need to be explored not only to understand the external influences, but also what business model changes are necessary for such responses. A better understanding of the mechanisms of business model innovation can be achieved by not only exploring the external drivers, but also linking them to specific internal changes. Although earlier contributions linking studies to established theories such as the resource-based view, transaction cost economics, activity systems perspective, dynamic capabilities and practice theory have proven to be vital in advancing the literature, developing a theory that elaborates on the antecedents, consequences and different facets of business model innovation is still needed (Sorescu *et al.*, 2011).

Theory can be advanced by depicting the mechanisms of business model innovation through the integration of both internal and external perspectives. Also, we call for more empirical work to uncover these mechanisms and provide managers with the necessary insights to carry out business model innovation.

7. Conclusions

The aim of this review was to explore how firms approach business model innovation. The current literature suggests that business model innovation approaches can either be evolutionary or revolutionary. However, the evidence reviewed points to a more complex picture beyond the simple binary approach, in that, firms can explore alternative business models through experimentation, open and disruptive innovations. Moreover, the evidence highlights further complexity to these approaches as we find that they are in fact a spectrum of various degrees of innovation ranging from modifying a single element, altering multiple elements simultaneously, to changing the interactions between elements of the business model innovation framework. This framework was developed as a navigation map for managers and researchers interested in how to change existing business models. It highlights the key areas of innovation, namely, value proposition, operational value, human capital and financial value. Researchers interested in this area can explore and examine the different paths firms can undertake to change their business models. Although this review pinpoints the different avenues for firm to undertake business model innovation, the mechanisms by which firms can change their business models and the external factors associated with such change remain underexplored.

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