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The Business Model: Recent Developments and Future Research

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This article provides a broad and multifaceted review of the received literature on business models in which the authors examine the business model concept through multiple subject-matter lenses. The review reveals that scholars do not agree on what a business model is and that the literature is developing largely in silos, according to the phenomena of interest of the respective researchers. However, the authors also found emerging common themes among scholars of business models. Specifically, (1) the business model is emerging as a new unit of analysis; (2) business models emphasize a system-level, holistic approach to explaining how firms "do business"; (3) firm activities play an important role in the various conceptualizations of business models that have been proposed; and (4) business models seek to explain how value is created, not just how it is captured. These emerging themes could serve as catalysts for a more unified study of business models.

Keywords: *innovation; business model; value creation; value capture; strategy*

In recent years, the business model has been the focus of substantial attention from both academics and practitioners. Since 1995, there have been at least 1,177 articles published in

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peer-reviewed academic journals in which the notion of a business model is addressed. The business model also has been the subject of a growing number of practitioner-oriented studies. While there has been an explosion in the number of articles published, and an abundance of conference sessions and panels on the subject of business models, it appears that researchers (and practitioners) have yet to develop a common and widely accepted language that would allow researchers who examine the business model construct through different lenses to draw effectively on the work of others.

In this comprehensive review of the academic literature, we have attempted to explore the origin of the business model concept and to examine it through multiple disciplinary and subject-matter lenses. This broad and multifaceted review revealed several insights, including the following:

- Despite the overall surge in the literature on business models, scholars do not agree on what a business model is. We observe that researchers frequently adopt idiosyncratic definitions that fit the purposes of their studies but that are difficult to reconcile with each other. As a result, cumulative progress is hampered.
- The literature is developing largely in silos, according to the phenomena of interest to the respective researchers. The main interest areas identified are (1) e-business and the use of information technology in organizations; (2) strategic issues, such as value creation, competitive advantage, and firm performance; and (3) innovation and technology management.
- Despite conceptual differences among researchers in different silos (and within the same silo), there are some emerging themes. Notably, (1) there is widespread acknowledgement—implicit and explicit—that the business model is a new unit of analysis that is distinct from the product, firm, industry, or network; it is centered on a focal firm, but its boundaries are wider than those of the firm; (2) business models emphasize a system-level, holistic approach to explaining how firms "do business"; (3) the activities of a focal firm and its partners play an important role in the various conceptualizations of business models that have been proposed; and (4) business models seek to explain both value creation and value capture. These emerging themes could serve as important catalysts for a more unified study of business models.

Our intended contributions in this article are twofold: first, to provide the most comprehensive and up-to-date literature review on business models, as well as to document carefully the discrepancies and dissonances in that literature, and second, to structure the literature along its main fault lines and begin to bridge the seemingly wide gaps between the various approaches. This should facilitate future cumulative research on the topic.

The review is structured as follows: We begin by briefly reviewing the emergence of the business model concept. Next, we proceed to the Method section, where we discuss the way this review has been carried out. We then review the business model literature by examining it through multiple lenses.

Method

To conduct this study, we followed a multistep process. First, we searched for articles published in leading academic and practitioner-oriented management journals during the period January 1975 to December 2009. Our initial list of academic journals included the *Academy of Management Journal* (*AMJ*), *Academy of Management Review* (*AMR*), *Administrative Science*

Quarterly (*ASQ*), *Journal of Management* (*JOM*), *Journal of Management Studies* (*JMS*), *Management Science* (*MS*), *MIS Quarterly, Organization Science* (*OS*), and *Strategic Management Journal* (*SMJ*). To these we added three of the leading practitioner-oriented journals, namely, the *California Management Review* (*CMR*), *Harvard Business Review* (*HBR*), and *MIT Sloan Management Review* (*MSM*). Focusing on articles that contain the term *business model* in the title or keywords, our initial search revealed 70 articles on business models of which 10 had been published in academic journals and 60 had appeared in *CMR, HBR,* and *MSM*.

This relatively small set of articles (especially those published in academic outlets) led us to extend our search, using the EBSCO Business Source Complete database as a starting point (see Certo, Holcomb, & Holmes, 2009; Laplume, Sonpar, & Litz, 2008). This database includes more than 1,300 business journals and represents one of the most complete sources on business studies. We searched the database for academic articles published from January 1975 to December 2009 containing the term *business model* in the title, abstract, or keywords. As a result of this process, we obtained 1,202 articles, which we added to our initial sample of 70 articles. As 19 of the newly added articles were already present in the initial sample, our overall sample contained 1,253 articles.

An initial cursory analysis of these articles, performed by reading article titles, journal names, abstracts, and introductions, revealed that not all the articles identified by our search would be useful for the purpose of writing this review. Many of these articles were case studies, summaries of articles published elsewhere, or studies in which the business model is not really the subject of the analysis.

To identify relevant articles, we adopted the following three additional criteria for our literature review on business models. First, to be included in our review, an article must deal with the business model concept in a nontrivial and nonmarginal way. Second, an article also must refer to the business model as a concept related to business firms (as opposed to, e.g., economic cycles). Finally, the journal in which the article appeared must be ranked in the ISI Web of Knowledge. As a result, we eliminated 1,120 articles that did not fit these criteria, which left us with a sample of 133 articles.

Through reading these 133 articles in depth, we became aware of further works on business models (in particular, books) that appeared relevant and that we therefore decided to include in our review. We also found working papers that our database research had failed to reveal, some of which were subsequently published and are included in the Reference section, which lists their updated publication status. Moreover, our careful reading of these articles also allowed us to exclude studies in which the business model was treated in a rather marginal or trivial way. Our final sample, therefore, included 103 publications.

Moreover, as we highlight below in the Discussion section, our analysis of these publications suggested some common themes, such as (1) the business model as a new unit of analysis, (2) a holistic perspective on how firms do business, (3) an emphasis on activities, and (4) an acknowledgement of the importance of value creation. These themes led us to review adjacent literatures that might be relevant for the study of business models but do not directly refer to the concept—namely, the literatures on new organizational forms, ecosystems, activity systems, and value chains and value networks. Drawing on these literatures could help put future research on business models on a more solid conceptual footing. Given the space and scope considerations for this article, however, we present our brief reviews of these adjacent literatures in an appendix that is available upon request from the authors.

Business Model Literature

Emergence of the Business Model Concept and Definitions

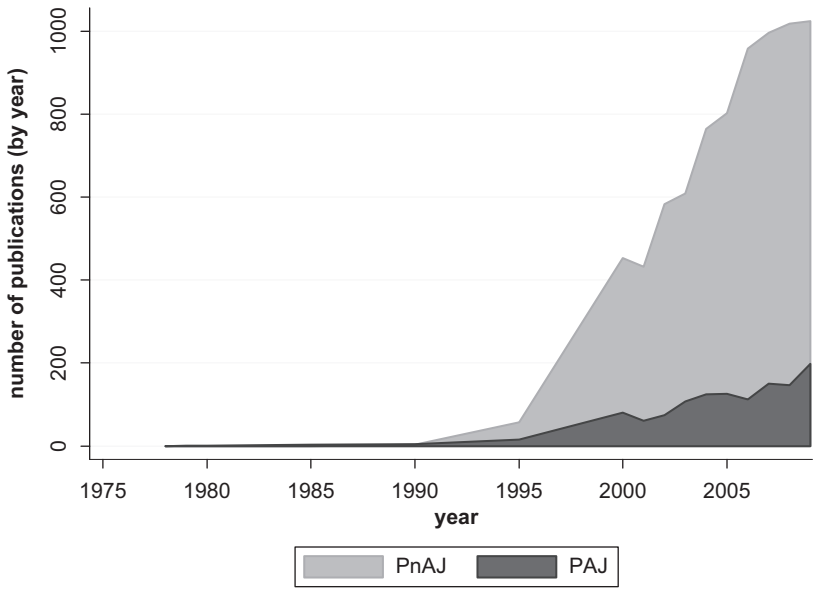
Emergence of the business model concept. Although business models have been integral to trading and economic behavior since pre-classical times (Teece, 2010), the business model concept became prevalent with the advent of the Internet in the mid-1990s, and it has been gathering momentum since then. From that time on, ideas revolving around the concept have resonated with scholars and business practitioners, as documented by the number of publications, including articles, books, and book chapters in the business press and scientific journals. In a frame analysis of the use of the term *business model* in public talk, Ghaziani and Ventresca (2005) searched for the use of the term in general management articles from 1975 to 2000. Their search, conducted using the ABI/INFORM database, returned 1,729 publications that contained the term *business model*. Of these, only 166 were published in the period 1975-1994; the remaining (1,563) belonged to the period 1995-2000, revealing a dramatic increase in the incidence of the term.

We performed a similar search using the EBSCOhost database, distinguishing between academic and journalistic outlets and extending the analysis to 2009. We found that up to December 2009, the term *business model* had been included in 1,202 articles in academic journals. Nonacademic articles followed a similar trend. From 1975 to December 2009, the term had been mentioned in 8,062 documents. As Figure 1 suggests, interest in the concept virtually exploded in the 15-year period between 1995 and 2010, which is consistent with Ghaziani and Ventresca's (2005) findings. Figure 1 also indicates that academic research on business models seems to lag behind practice.

Some scholars surmise that the emergence of the business model concept, and the extensive use of the concept since the mid-1990s, may have been driven by the advent of the Internet (e.g., Amit & Zott, 2001), rapid growth in emerging markets and interest in "bottom-of-the-pyramid" issues (Prahalad & Hart, 2002; Seelos & Mair, 2007; Thompson & MacMillan, 2010), and the expanding industries and organizations dependent on postindustrial technologies (Perkmann & Spicer, 2010).

Business model definitions. At a general level, the business model has been referred to as a *statement* (Stewart & Zhao, 2000), a *description* (Applegate, 2000; Weill & Vitale, 2001), a *representation* (Morris, Schindehutte, & Allen, 2005; Shafer, Smith, & Linder, 2005), an *architecture* (Dubosson-Torbay, Osterwalder, & Pigneur, 2002; Timmers, 1998), a *conceptual tool or model* (George & Bock, 2009; Osterwalder, 2004; Osterwalder, Pigneur, & Tucci, 2005), a *structural template* (Amit & Zott, 2001), a *method* (Afuah & Tucci, 2001), a *framework* (Afuah, 2004), a *pattern* (Brousseau & Penard, 2006), and a *set* (Seelos & Mair, 2007). Surprisingly, however, the business model is often studied without an explicit definition of the concept. Of the 103 business model publications reviewed, more than one third (37%) do not define the concept at all, taking its meaning more or less for granted. Fewer than half (44%) explicitly define or conceptualize the business model, for example, by enumerating its main components. The remaining publications (19%) refer to the work of other scholars in defining the concept. Moreover, existing definitions only partially overlap, giving rise to a multitude of possible interpretations.

Figure 1
Business Model Articles in the Business/Management Field



Note: This area graph shows trends in the number of business model articles. PnAJ = articles published in nonacademic journals; PAJ = articles published in academic journals.
Source: Business Source Complete, EBSCOhost database, January 1975–December 2009.

This lack of definitional clarity represents a potential source of confusion, promoting dispersion rather than convergence of perspectives and obstructing cumulative research progress on business models. Table 1 summarizes some of the most prevalent definitions suggested for the business model and shows which articles have adopted these definitions.

Our review further revealed that the business model has been employed mainly in trying to address or explain three phenomena: (1) e-business and the use of information technology in organizations; (2) strategic issues, such as value creation, competitive advantage, and firm performance; and (3) innovation and technology management. Although we do not wish to claim mutual exclusivity among these categories, we believe that they allow us to broadly classify the business model literature. Therefore, we use them as organizing principles for this review.

Business Models for e-Business

The research stream that, to date, has devoted the greatest attention to business models concerns e-business. The term *e-business* means "doing business electronically." It encompasses e-commerce, e-markets, and Internet-based business and refers to firms that conduct

Table 1
Selected Business Model Definitions

Author(s), Year	Definition	Papers Citing the Definition
Timmers, 1998	The business model is "an architecture of the product, service and information flows, including a description of the various business actors and their roles; a description of the potential benefits for the various business actors; a description of the sources of revenues" (p. 2).	Hedman & Kalling, 2003
Amit & Zott, 2001; Zott & Amit, 2010	The business model depicts "the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities" (2001: 511). Based on the fact that transactions connect activities, the authors further evolved this definition to conceptualize a firm's business model as "a system of interdependent activities that transcends the focal firm and spans its boundaries" (2010: 216).	Hedman & Kalling, 2003; Morris, Schindehutte, & Allen, 2005; Zott & Amit, 2007, 2008; Santos, Spector, & Van Der Heyden, 2009; Bock, Opsahl, & George, 2010
Chesbrough & Rosenbloom, 2002	The business model is "the heuristic logic that connects technical potential with the realization of economic value" (p. 529).	Chesbrough, Ahern, Finn, & Guerraz, 2006; Chesbrough, 2007a, 2007b; Teece, 2007, 2010
Magretta, 2002	Business models are "stories that explain how enterprises work. A good business model answers Peter Drucker's age old questions: Who is the customer? And what does the customer value? It also answers the fundamental questions every manager must ask: How do we make money in this business? What is the underlying economic logic that explains how we can deliver value to customers at an appropriate cost?" (p. 4).	Seddon, Lewis, Freeman, & Shanks, 2004; Ojala & Tyrväinene, 2006; Demil & Lecocq, 2010
Morris et al., 2005	A business model is a "concise representation of how an interrelated set of decision variables in the areas of venture strategy, architecture, and economics are addressed to create sustainable competitive advantage in defined markets" (p. 727). It has six fundamental components: Value proposition, customer, internal processes/competencies, external positioning, economic model, and personal/investor factors.	Calia, Guerrini, & Moura, 2007
Johnson, Christensen, & Kagermann, 2008	Business models "consist of four interlocking elements, that, taken together, create and deliver value" (p. 52). These are customer value proposition, profit formula, key resources, and key processes.	Johnson & Suskewicz, 2009
Casadesus-Masanell & Ricart, 2010	"A business model is . . . a *reflection* of the firm's *realized* strategy" (p. 195).	Hurt, 2008; Baden-Fuller & Morgan, 2010
Teece, 2010	"A business model articulates the logic, the data and other evidence that support a value proposition for the customer, and a viable structure of revenues and costs for the enterprise delivering that value" (p. 179).	Gambardella & McGahan, 2010

commercial transactions with their business partners and buyers over the Internet (e.g., Mahadevan, 2000). We exclude those firms that merely make use of websites to display information for products or services.

Recent advances in communication and information technologies, such as the emergence and swift expansion of the Internet and the rapid decline in computing and communication costs, have allowed the development of new ways to create and deliver value, which have offered scope for the creation of unconventional exchange mechanisms and transaction architectures (Amit & Zott, 2001) and accentuated the possibilities for the design of new boundary-spanning organizational forms (Daft & Lewin, 1993; Dunbar & Starbuck, 2006). Indeed, these developments have opened new horizons for the design of business models by enabling firms to change fundamentally the way they organize and engage in economic exchanges, both within and across firm and industry boundaries (Mendelson, 2000). According to Brynjolfsson and Hitt (2004), this includes the ways in which firms interact with suppliers as well as with customers.

The Internet is a principal driver of the surge of interest in business models and the consequent emergence of a literature that revolves around the topic (e.g., see Ghaziani & Ventresca, 2005; Magretta, 2002; Yip, 2004). Shafer et al. (2005) review 12 definitions in established publications during the period 1998-2000, finding that 8 were related to e-business. Our literature review confirms this trend. In a total of 49 conceptual studies in which the business model is clearly defined, almost one fourth of the studies are related to e-business. Research on e-business models can be organized around two complementary streams: The first aims to describe generic e-business models and provide typologies; the second focuses on the components of e-business models.

Description of generic e-business models and typologies. Several scholars have attempted to classify e-business models by describing types. Timmers (1998) distinguishes among 11 generic e-business models, from e-shops and e-procurement to trust and other third-party services. Tapscott, Lowy, and Ticoll (2000) propose a network- and value-centered taxonomy that identifies five types of value networks that they call b-webs (business webs), which differ in their degree of economic control and value integration. Rappa (2001) classifies companies according to the nature of their value propositions and their modes of generating revenues. Weill and Vitale (2001) describe eight so-called atomic business models, each of which describes a different way of conducting business electronically; e-business initiatives can be represented by pure atomic business models or by combining them. Applegate (2001) introduces the following six e-business models: focused distributors, portals, producers, infrastructure distributors, infrastructure portals, and infrastructure producers. And Dubosson-Torbay et al. (2002) identify the following principal dimensions for classifying business models: user's role, interaction pattern, nature of the offering, pricing system, level of customization, and economic control. What is common to all these approaches is an attempt to describe and organize around typologies and taxonomies the plethora of new perceived business archetypes enabled mainly by Internet technologies.

Components of e-business models. In addition to developing typologies that enlist and describe various generic e-business models, scholars of e-business have also attempted to

distinguish first- and second-order themes among the components of e-business models. Table 2 presents a summary of these efforts.

Business model representations. Several authors have attempted to represent business models through a mixture of informal textual, verbal, and ad hoc graphical representations (e.g., Amit & Zott, 2002). Weill and Vitale (2001) introduce a set of simple schematics intended to provide tools for the analysis and design of e-business initiatives. Their "e-business model schematics" are based on three classes of objects: participants (firm of interest, customers, suppliers, and allies), relationships, and flows (money, information, product, or service). In a related vein, Tapscott et al. (2000) suggest a value map for depicting how a business web operates. The value map depicts all key classes of participants (partners, customers, suppliers) and value exchanges between them (tangible and intangible benefits and knowledge).

Other scholars have provided a business model ontology, which is a conceptualization and formalization of the elements, relationships, vocabulary, and semantics of a business model (Osterwalder, 2004) and which is structured into several levels of decomposition with increasing depth and complexity. Tankhiwale (2009) applies such an ontology in a longitudinal case study in order to trace the evolution of a telecommunication firm's business model and its impact on the firm's business process architecture. Gordijn and Akkermans (2001) propose a conceptual modeling approach. Their ontology borrows concepts from the business literature, such as actors, value exchanges, value activities, and value objects, and uses these notions to model networked constellations of enterprises and end-consumers who create, distribute, and consume things of economic value.

Strategic marketing in e-business. In the domain of e-business, some scholars have focused on the changing nature of customer–firm relationships. A special concern has been the monetization of e-business. Pauwels and Weiss (2008) examine "fee and free" business models for providing digital content on the Internet. Their work focuses on the firm performance implications of a shift from the "free" to the "fee" model and empirically analyzes the role that marketing actions can play in accommodating this shift.

In this regard, scholars have also examined the degree of Internet advertising effectiveness. Clemons (2009) provides an overview of business models for monetizing Internet applications. He argues that although the majority of attempts to monetize Internet applications targeted at individuals have focused on natural extensions of traditional media or traditional retailing, there are several potential online business models that are not based on advertising and that, given declining advertising effectiveness, might constitute a better choice.

Scholars have also noted the convergence of different media channels onto one digital platform (e.g., see Fidler, 1997), which has resulted in structural change in the media industry. McPhillips and Merlo (2008) refer to this convergence by introducing the term *media business model*. Structural change in the media industry also has been driven by the advent of new communication channels, such as mobile e-services (m-services). Eriksson, Kalling, Åkesson, and Fredberg (2008) consider e-newspapers published for mobile reading devices equipped with e-paper displays, and they analyze the implication of future m-service innovation on the development of new business models. Huizingh (2002) has studied how to help managers design such e-business models.

Table 2
Components of e-Business Models

Author(s), Year	First-Order Theme(s)	Second-Order Theme(s)
Mahadevan, 2000	• Value stream for partners and buyers network (identifies the value proposition for the buyer, sellers, and market makers and portals in an Internet context) • Revenue stream (a plan for assuring revenue generation for the business) • Logistical stream (addresses various issues related to the design of the supply chain for the business)	
Stewart, & Zhao, 2000	• Profit stream (includes the revenue stream and cost structure)	• Customer selection • Value capture • Differentiation and strategic control • Scope
Afuah & Tucci, 2001	• A system made of components, linkages between components, and dynamics • Customer value (the extent to which the firm's offer is distinct or has a lower cost than its competitors') • Revenue sources (Where do the dollars comes from? Who pays what value and when? What are the margins in each market, and what drives them? What drives value in each source?)	• Scope • Price • Connected activities • Implementation • Capabilities • Sustainability
Alt & Zimmerman, 2001	• Mission • Structure • Processes • Revenues • Legal issues • Technology	Mission: • Goals, vision, value proposition Structure: • Actors and governance, focus Processes: • Customer orientation, coordination mechanism Revenues: • Source of revenues, business logic
Applegate, 2001	• Concept (describes an opportunity) • Capabilities (define the resources needed to turn concept into reality) • Value (measures the return to investors and other stakeholders)	Concept: • Market opportunity, product and service offered, competitive dynamic, strategy for capturing a dominant position, strategic options for evolving the business Capabilities: • People and partners, organization and culture, operating model, marketing sales model, management model, business development model, infrastructure model

(continued)

Table 2 (continued)

Author(s), Year	First-Order Theme(s)	Second-Order Theme(s)
		Value: • Benefits returned to stakeholders, benefits returned to the firm, market share and performance, brand and reputation, financial performance
Rappa, 2001	• Sustainability • Revenue stream • Cost structure • Value chain positioning	
Osterwalder, 2004	• Value proposition • Customer segments • Partners' network • Delivery channel • Revenue stream	• Relationship • Value configuration • Capability • Cost structure
Bonaccorsi, Giannangeli, & Rossi, 2006	• Products and services delivery • Customers • Costs structure • Income	• Network (structural aspects) • Network externalities
Brousseau & Penard, 2006	• Costs • Revenue stream • Sustainable income generation • Goods and services production and exchanges	• Pricing strategies • Relationships (demand and supply) • Network externalities

Summary of literature on business models in e-business. Scholars focusing on e-business as an area for research on business models have been interested mainly in understanding the gestalt of firms engaging in (new) Internet-based ways of doing business and the (new) roles that these firms play in their respective ecosystems. For that purpose, scholars have (1) defined and represented generic (e-)business models and/or (2) developed typologies and taxonomies; they appear to have been less concerned with causal explanation or empirical testing. Their mostly descriptive contributions highlight, to varying degrees, the notion of value (e.g., value stream, customer value, value proposition), financial aspects (e.g., revenue streams, cost structures), and aspects related to the architecture of the network between the firm and its exchange partners (e.g., delivery channels, network relationships, logistical streams, infrastructure). Each of these components may constitute part of a generic business model, and it could be a source of differentiation among business model types.

Thus, in this literature stream, the business model is *not* a value proposition, a revenue model, or a network of relationships by itself; it is all of these elements together. Accordingly, none of the articles in this literature stream analyzes the relationship between any business model component (e.g., revenue mechanism, configuration of control activities, pricing system, or interaction pattern) and other constructs, a fact that renders the delineation of potential antecedents or consequences of the business model difficult.

Business Models and Strategy: Value Creation and Value Capture Through Activities

The business model has received increasing attention from scholars and business strategists interested in explaining firms' value creation, performance, and competitive advantage.

Value creation in networked markets. The digital economy has provided firms with the potential to experiment with novel forms of value creation mechanisms, which are networked in the sense that value is created in concert by a firm and a plethora of partners, for multiple users. This redefinition of value has attracted the attention of management scholars, who have employed the concept of the business model in their attempts to explain value creation in networked markets (e.g., Zott & Amit, 2009). However, in explaining value creation, the concept of the business model has been used not only in the context of the digital economy. Seelos and Mair, for example, have studied value creation mechanisms in the context of deep poverty. They conceptualize a business model as a "set of capabilities that is configured to enable value creation consistent with either economic or social strategic objectives" (2007: 53). Similarly, Thompson and MacMillan (2010) propose a framework for developing new business models that can lead to societal wealth improvements (e.g., reduce poverty and human suffering). Thus, value creation can refer to different forms of value (such as social or economic).

Value creation mechanisms often go beyond the value that can be created through Schumpeterian innovation, the (re)configuration of the value chain (Porter, 1985), the formation of strategic networks among firms, or the exploitation of firms' specific core competencies. As Amit and Zott (2001) observe, the locus of value creation, and thus the appropriate unit of analysis for scholars interested in value creation, spans firms' and industries' boundaries. The authors conclude that prior frameworks used in isolation cannot sufficiently address questions about total value creation. Based on a sample of 150 firms, they propose four potential sources of value creation through business models: (1) novelty, (2) lock-in, (3) complementarities, and (4) efficiency. These value drivers can be mutually reinforcing; that is, the presence of each value driver can enhance the effectiveness of any other value driver.

Value can also be created through revolutionary business models. According to Hamel (2000), to thrive in the "age of revolution," companies must develop new business models—in which both value creation and value capture occur in a value network—which can include suppliers, partners, distribution channels, and coalitions that extend the company's resources.

Business model and firm performance. While some literature on the business model tends to concentrate on the firm's activities with its network of partners, scholars increasingly are acknowledging that firms do not execute their business models in a competitive vacuum (Hamel, 2000) and that firms can compete through their business models (Casadesus-Masanell & Ricart, 2010). The business model, then, represents a potential source of competitive advantage (Markides & Charitou, 2004). The novelty presented by new, effective models can result in superior value creation (Morris et al., 2005) and replace the old way of

doing things to become the standard for the next generation of entrepreneurs to beat (Magretta, 2002).

Business models can play a central role in explaining firm performance. Afuah and Tucci propose the business model as a unifying construct for explaining competitive advantage and firm performance and define it as "the method by which a firm builds and uses its resources to offer its customer better value and to make money in doing so" (2001: 3). Afuah (2004) focuses on firms' profitability and introduces a strategic framework in which the business model is conceptualized by means of a set of components that corresponds to the determinants of firm profitability.

While the work of Afuah (2004) and Afuah and Tucci (2001) is conceptual, some authors have conducted empirical analyses. Zott and Amit (2007) have analyzed the performance implications of business model design in entrepreneurial firms. They refer to the business model design as the design of a focal firm's set of boundary-spanning transactions with external parties. In their view, the essence of the association between business model design and focal firm performance can be analyzed by looking at two distinct effects: the total value creation potential of the business model design and the focal firm's ability to appropriate that value. They identify two design themes around which the business model can be orchestrated: efficiency and novelty. In their empirical work, Zott and Amit see the business model as the independent variable, and they link it to firm performance, moderated by the environment.

In another empirical study on firm performance, Patzelt, Knyphausen-Aufseβ, and Nikol (2008) introduce the business model as a variable moderating the effect of top management team composition and organizational performance. They analyze a set of biotechnology ventures in the German industry and focus on two types of business models that biotechnology firms might adopt: platform and therapeutics. They show that the founder-based, firm-specific experience of management team members can have either a positive or a negative effect on the firm's performance, depending on the business model adopted. Similarly, Zott and Amit (2008) acknowledge the possible contingent effect of the business model in mediating between product market strategy and firm performance. They root their study in contingency theory, and they ask, How do the firm's business model and product market strategy interact to impact the firm performance? They find that (1) business models that emphasize novelty and are coupled with either differentiation or cost leadership can have a positive impact on the firm's performance and (2) novelty-centered business models together with early entry into a market have a positive effect on performance.

Other studies on the performance implications of business model design come from business practitioners and consultants (e.g., Linder & Cantrell, 2001). Consultants at IBM, interviewing 765 corporate and public-sector leaders worldwide, found that firms that were financial outperformers put twice as much emphasis on business model innovation as did underperformers (IBM Global Business Services, 2006). Giesen, Berman, Bell, and Blitz (2007), examined the relationship between business model innovation and firm performance. They identify three types of business model innovation, namely, *industry models* (innovations in industry supply chain), *revenue models* (innovations in how companies generate value), and *enterprise models* (innovations in the role the structure of an enterprise plays in new or existing value chains). They report two key findings: (1) each type of business model innovation can generate success, and (2) innovation in enterprise models that focuses on

external collaboration and partnerships is particularly effective in older companies as compared to younger ones.

Strategy and the business model. The business model extends central ideas in business strategy and its associated theoretical traditions. Scholars contend that the business model can be a source of competitive advantage that is distinct from the firm's product market position (Christensen, 2001). Firms that address the same customer need and pursue similar product market strategies can do so with very different business models; business model design and product market strategy are complements, not substitutes (Zott & Amit, 2008).

Two main differentiating factors seem to have captured the attention of scholars. The first is the traditional emphasis of strategy on competition, value capture, and competitive advantage, whereas the business model concept seems to focus more on cooperation, partnership, and joint value creation (Magretta, 2002; Mäkinen & Seppänen, 2007; Mansfield & Fourie, 2004). The second factor of interest to management scholars is the focus of the business model concept on the value proposition and a generalized emphasis on the role of the customer, which appears to be less pronounced elsewhere in the strategy literature. Our review reveals a strong consensus that the business model revolves around customer-focused value creation (Chesbrough & Rosenbloom, 2002; Mansfield & Fourie, 2004). Viewed from this perspective, the business model encompasses the pattern of the firm's economic exchanges with external parties (Zott & Amit, 2008); it outlines the essential details of a firm's value proposition for its various stakeholders as well as the activity system the firm uses to create and deliver value to its customers (Seddon, Lewis, Freeman, & Shanks, 2004).

Despite the highlighted conceptual differences between business models and certain aspects of firm strategy, scholars have also emphasized that the business model can play an important role in a firm's strategy. According to Richardson (2008), the business model explains how the activities of the firm work together to execute its strategy, thus bridging strategy formulation and implementation. In a similar vein, both Shafer et al. (2005) and Casadesus-Masanell and Ricart (2010) view the business model as a reflection of a firm's realized strategy. According to Teece, the business model reflects a "hypothesis about what customers want, and how an enterprise can best meet those needs, and get paid for doing so" (2007: 1329).

Summary of literature on business models in the strategy field. In the strategy literature, research on business models has revolved mainly around three aspects: (1) the networked nature of value creation, (2) the relationship between business models and firm performance, and (3) the distinction between the business model and other strategy concepts. Since strategy scholars are generally interested in a firm's activities (as these help explain, e.g., how a firm distinguishes itself from its competitors), it is not surprising that many of the business model conceptualizations proposed in this literature stream center on (or at least include) the notion of activities or activity systems.

In the absence of a commonly accepted definition, scholars' attempts at conceptual refinement have helped clarify at least what a business model is *not*. First, the business model does not involve a linear mechanism for value creation from suppliers to the firm to its customers. Value creation through business models involves a more complex, interconnected set of

exchange relationships and activities among multiple players. Second, the business model is not the same as product market strategy (i.e., it does not refer to firm positioning in product markets based on differentiation or cost leadership in certain activities) or corporate strategy (i.e., it does not describe or prescribe the areas of business in which a firm becomes active). Third, the business model cannot be reduced to issues that concern the internal organization of firms (e.g., control mechanisms, incentive systems); activity systems, even though centered on a focal firm, typically span firm boundaries. However, the business model can be a source of competitive advantage.

Business Models, Innovation, and Technology Management

The business model concept also has been addressed in the domains of innovation and technology management. Two complementary ideas seem to characterize the research. The first is that companies commercialize innovative ideas and technologies through their business models. The second is that the business model represents a new subject of innovation, which complements the traditional subjects of process, product, and organizational innovation and involves new forms of cooperation and collaboration.

One important role of the business model could consist of unlocking the value potential embedded in new technologies and converting it into market outcomes. Chesbrough and Rosenbloom (2002) detail an extensive case study in which they show how the Xerox Corporation grew in part by employing an effective business model to commercialize a technology rejected by other leading companies. The study also compares successful and unsuccessful technology spin-offs with comparable market potential and finds that in successful ventures the search and learning for an effective business model was significantly higher than in failed ventures. Björkdahl (2009) employs the business model concept for studying technology diversification and cross-fertilization efforts. His central argument is that the integration of new technologies into the technology base of a product (i.e., technology cross-fertilization) can open up new subspaces in the existing technical performance and functionality space, which in turn requires a new business model if the economic value potential of the new technology is to be captured.

Business models not only can entail consequences for technological innovations but also can be shaped by them. Calia, Guerrini, and Moura (2007) show how technological innovation can trigger changes in the company's operational and commercial activities, and hence in the business model.

Although these studies have examined the role of business models in commercializing technologies at the level of the individual firm, more recently Johnson and Suskewicz (2009) have pointed to the importance of the business model for entire industries. They argue that in large infrastructural change (such as the transition from a fossil fuel economy to a cleantech economy) the key is to shift the focus from developing individual technologies to creating whole new systems. The business model is introduced as part of a comprehensive framework for thinking about systemic change.

In summary, studies on business models, innovation, and technology management have asserted that technological innovation is important for firms, but it might not suffice to guarantee

firm success (e.g., Doganova & Eyquem-Renault, 2009). This is because technology per se has no inherent value (Chesbrough, 2007a, 2007b). Besides embedding technology in attractive products and services, a firm needs to design a unique business model to fully realize its commercial potential. Indeed, business models matter even for general purpose technologies (i.e., "half polished" applications sold at intermediate development stages), which upstream firms license to downstream firms rather than developing final product themselves (Gambardella & McGahan, 2010).

Business model innovation. In addition to adopting business models to facilitate technological innovation and the management of technology, firms can view the business model itself as a subject of innovation (Mitchell & Coles, 2003). Chesbrough (2003) introduced the notion of *open innovation* as a mode of innovation in which firms, rather than relying on internal ideas to advance business, look outside their boundaries in order to leverage internal and external sources of ideas. A concept similar to open innovation is *collaborative entrepreneurship,* which is "the creation of something of economic value based on new jointly generated ideas that emerge from the sharing of information and knowledge" (Miles, Miles, & Snow, 2006: 2). Open innovation requires the adoption of new, open business models designed for sharing or licensing technologies (Chesbrough, 2007b, 2010). The business model itself can become part of intellectual property (Rappa, 2001; Rivette & Kline, 2000). Open business models, apart from being a subject of innovation, may prompt additional business model innovation in complementary markets as a consequence of the reconfiguration of downstream activities and capabilities (Gambardella & McGahan, 2010).

From the point of view of the focal firm, the activities of external innovators can be organized as a collaborative community or as a market (Boudreau & Lakhani, 2009), which in turn implies different business model configurations: in the former (community), members are often willing to collaborate and work for free, while in the latter (market) innovators develop multiple competing varieties of complementary goods, components, or services, with little cooperation among them.

There is an increasing consensus that business model innovation is key to firm performance. A significant number of scholars focus on business model innovation as a vehicle for corporate transformation and renewal (e.g., Demil & Lecocq, 2010; IBM Global Business Services, 2006; Ireland, Hitt, Camp, & Sexton 2001; Johnson, Christensen, & Kagermann, 2008; Sosna, Trevinyo-Rodríguez, & Velamuri, 2010). Bouchikhi and Kimberly (2003) and Chesbrough (2010) have identified barriers to business model innovation in existing firms, such as the configurations of assets and processes, which may be subject to inertia, as well as the cognitive inability of managers to understand the value potential of a new business model. How can these barriers be overcome? Some scholars contend that the business model takes shape through a process of experimentation (Hayashi, 2009; McGrath, 2010), which might differ for different organizations in different competitive landscapes. Sheehan and Stabell (2007), for example, propose a three-step process of analysis to help managers in knowledge-intensive organizations improve their business models.

A specific leadership agenda might be required for business model innovation (Svejenova, Planellas, & Vives, 2010). To overcome the rigidity that accompanies established business models, Doz and Kosonen (2010) propose that companies be made more agile, which can be

achieved by developing three meta-capabilities: strategic sensitivity, leadership unity, and resource flexibility. In a similar vein, Smith, Binns, and Tushman highlight how the effective management of complex business models "depend[s] on leadership that can make dynamic decisions, build commitment to both overarching visions and agenda specific goals, learn actively at multiple levels and engage conflict" (2010: 448). Santos, Spector, and Van Der Heyden (2009) also emphasize the importance of the behavioral aspects involved in business model innovation. They suggest that mutual engagement and organizational justice are needed and that managers should focus on the relational dynamics at the level of informal organization.

Summary of literature on business models and technology management. In the technology and innovation management field, the business model is mainly seen as a mechanism that connects a firm's (innovative) technology to customer needs and/or to other firm resources (e.g., technologies). The business model is conceptually placed between a firm's input resources and market outcomes, and it "embodies nothing less than the organizational and financial 'architecture' of the business" (Teece, 2010: 173). The business model, according to this more functionalist perspective, complements technology, but technology is seen as an enabler of the business model rather than as a part of the concept per se. Neither input resources nor competition in output markets is considered part of the business model concept. The core logic of a business model, instead, revolves around a firm's revenues and costs, its value proposition to the customer, and the mechanisms to capture value. Thus conceived, the business model can be a vehicle *for* innovation as well as a subject *of* innovation.

Discussion

Throughout our review, we have shown that the business model concept has been used to address different research questions in different contexts and in different management areas. Scholars have used the same term (i.e., *business model*) to explain and address different phenomena such as e-business types, value creation or value capture by firms, and how technology innovation works. Research about the role of business models has proceeded in largely isolated fashion within these "silos." There has also been a range of conceptualizations of business models within each silo. This multitude of (sometimes ad hoc) conceptualizations has prevented, or at least significantly slowed, cumulative research.

Given that interest in the concept has emerged only recently, it is not surprising that the literature is currently characterized by a lack of clarity about the meaning of the business model concept. Definitional and conceptual disagreement is to be expected during the emergent phase of any new potentially big idea of general usefulness (Gladwin, Kennelly, & Krause, 1995). We use the opportunity that this emergent phase offers to review the various developments by (1) comparing and contrasting the various approaches to business models in each of three literature streams (see Table 3) and (2) suggesting possibilities for moving forward.

Our literature review reveals that scholars in different fields use the same term to explain different phenomena. In other words, the term *business model* in its current use is not one

Table 3
Comparing and Contrasting Literatures on Business Models

	e-Commerce	Strategy	Technology and Innovation Management
Main **purpose** (why the business model concept is offered)	To describe new gestalts and Internet-based ways of "doing business" To offer typologies or taxonomies (to which class does an observed business model belong to?)	To explain new network- and activity system–based value creation mechanisms and sources of competitive advantage	To understand how technology is converted into market outcomes • To understand new networked modes of innovation
What a business model is **not**	Components in isolation, e.g., • Marketing model or strategy (Timmers, 1998) • Network structure (Tapscott et al., 2000) • Pricing model/strategy (Rappa, 2001) • Revenue model/cost structure (Dubosson-Torbay, Osterwalder, & Pigneur, 2002) • Value proposition (Dubosson-Torbay et al., 2002)	• Business processes (Shafer, Smith, & Linder, 2005) • Market adoption strategy (Ojala & Tyrväinene, 2006) • Corporate strategy (Richardson, 2008) • Product market strategy (Zott & Amit, 2008) • Senior leadership team processes and structures (Smith, Binns, & Tushman, 2010)	• Technology (Chesbrough & Rosenbloom, 2002) • Open innovation, collaborative entrepreneurship (Chesbrough, 2003; Miles, Miles, & Snow, 2006) • Management teams (Patzelt, Knyphausen-Aufseß, & Nikol, 2008) • Policy (Johnson & Suskewicz, 2009)
Antecedents of business models	• New information and communication technologies (Timmers, 1998; Dubosson-Torbay et al., 2002)	• Value drivers (Amit & Zott, 2001) • Choices (e.g., Shafer et al., 2005; Casadesus-Masanell & Ricart, 2010) • External pressures, regulation (Tankhiwale, 2009) • Discovery-driven experimentation (McGrath, 2010)	• Technology (Chesbrough & Rosenbloom, 2002; Chesbrough, 2007a) • Technological development, innovation (Calia, Guerrini, & Moura, 2007; Björkdahl, 2009)
Mechanisms through which business models influence outcomes	• Value chain deconstruction and reconstruction (Timmers, 1998) • Pricing systems (Tapscott et al., 2000; Rappa, 2001) • Revenue mechanisms (Rappa, 2001) • Control activities, transaction governance structure (Weill & Vitale, 2001)	• Competitive advantage, unique value propositions (Teece, 2007) • Total value creation and distribution of bargaining power through business model design themes (Zott & Amit, 2007, 2008) • Advantageous cost structures (Teece, 2007) • Schumpeterian innovation (Teece, 2010)	• Connection of technology with customers (Chesbrough, & Rosenbloom, 2002) • Network plays (Calia et al., 2007; Björkdahl, 2009)

(continued)

Table 3 (continued)

	e-Commerce	Strategy	Technology and Innovation Management
	• Interaction patterns (Mahadevan, 2000; Dubosson-Torbay et al., 2002)		
Outcomes and consequences of business models	• Industry structure (Applegate, 2001; McPhillips & Merlo, 2008) • Rules of competition (Applegate, 2001; Tapscott et al., 2000) • Value capture (Pauwels & Weiss, 2008; Clemons, 2009)	• Total value creation (Amit & Zott, 2001) • Competitive advantage (Christensen, 2001) • Firm performance, e.g., measured as stock market value (e.g., Zott & Amit, 2007, 2008; Casadesus-Masanell & Ricart, 2010)	• Creation and appropriation of value from technology (Chesbrough & Rosenbloom, 2002) • Value creation (Hedman & Kalling, 2003) • Innovation network dynamics (Calia et al., 2007) • Relationship infrastructure (Björkdahl, 2009)

concept; it is many concepts. Hence, the adoption of more precise concepts and terminology that indicate the researcher's main analytical focus will greatly enhance clarity. Examples of such concepts could be *e-business model archetype* (for studies on e-business model types), *business model as activity system* (for strategy studies focusing on boundary-spanning activities), or *business model as cost/revenue architecture* (for technology management and innovation scholars interested in explaining the economic mechanisms that allow a firm to commercialize technological innovations).

Our literature review offers a second possible avenue for advancing research on business models by suggesting the emergence of some common ground among various business model researchers, despite the disparity of their approaches in terms of concepts used and phenomena explained. It is our hope that the four common themes identified in this review, and elaborated below, will pave the way for future conceptual convergence and breakthroughs.

First, the business model is—explicitly or implicitly—considered as a new unit of analysis (see Tables 1 and 2), which spans or bridges traditional units of analysis, such as the firm or the network. Some researchers view the business model closer to the firm (e.g., Casadesus-Masanell & Ricart, 2010; Hurt, 2008), others place it closer to the network (e.g., Tapscott et al., 2000), and for others still it is nested between the firm and the network (e.g., Amit & Zott, 2001). Most business model scholars would agree, however, that it is a new, distinct concept, worthwhile of academic study and relevant in practice.

Second, as evidenced by the large number of studies attempting to provide business model typologies, business model researchers generally adopt a holistic and systemic (as opposed to particularistic and functional) perspective, not just on *what* businesses do (e.g., what products

and services they produce to serve needs in addressable market spaces) but also on *how* they do it (e.g., how they bridge factor and product markets in serving the needs of customers). The business model perspective thus involves simultaneous consideration of the content and process of "doing business," which explains part of the challenge in defining and operationalizing the construct.

Third, many scholars include activities, performed either by a focal firm or by its suppliers, partners, or customers, as part of their conceptualization (McGrath, 2010; Teece, 2010; Zott & Amit, 2010). In many business model definitions, the activity perspective is recurrent, either implicitly or explicitly. Some scholars point directly to activities (e.g., Afuah, 2004; Hedman & Kalling, 2003; Seddon et al., 2004), whereas others imply them indirectly, for example by pointing to processes (e.g., Alt & Zimmerman, 2001; Johnson et al., 2008; Morris et al., 2005), functionalities (e.g., Van Der Vorst, Van Dongen, Nouguier, & Hilhorst, 2002), or transactions (Amit & Zott, 2001). All these concepts are related to the notion of activities.

Combined with the first and second emerging common themes, identified above (i.e., business models are a new unit of analysis and represent a system-level concept), the third theme suggests a view of the business model as a firm-centric, yet boundary-spanning, activity system. This view is consistent with the representational nature that is often attributed to the business model (e.g., Applegate, 2000; Morris et al., 2005; Shafer et al., 2005; Stewart & Zhao, 2000; Weill & Vitale, 2001) as well as its systemic nature (e.g., Dubosson-Torbay et al., 2002; Timmers, 1998). A business model can be viewed as a "system that is made up of components, linkages between components, and dynamics" (Afuah & Tucci, 2001: 4). And many of the modeling tools that have been proposed with the aim of representing the business model can be conceptualized as systems of activities. In a nutshell, the received literature on business models seems to support an activity system perspective.

A fourth insight that emerges from our review of the literature is that business model scholars have shifted emphasis from value capture to value creation, highlighting the latter without ignoring the former. Indeed, the business model promotes a dual focus on value creation and value capture. The centrality of the notion of value in the business model literature is apparent from the various conceptualizations of the business model that have been proposed (see Tables 1 and 2). For example, an analysis of the business model components shown in Table 2 as first- and second-order themes reveals that the most prevalent component is related to the concept of value. The customer value proposition, for instance, is a recurrent component in the various definitions that have been provided. The centrality of the concept of value in the business model literature is evident in all three areas around which we have organized our review: e-business, strategy, and innovation. Even those business model scholars who tend to focus on how value is appropriated by the focal firm recognize that value is created through the focal firm in concert with its exchange partners.

Taken together, these four emerging themes—the business model as a new unit of analysis, as a system-level concept, centered on activities, and focusing on value—could serve as important catalysts for a more unified study of business models.

Limitations and future research. Despite our attempt to rigorously and objectively analyze the received literature on business models, this review comes with several limitations. First,

much of the reviewed literature is quite recent, dating back only a decade or so. Second, only a few contributions have appeared in top journals. Third, the literature is widely divergent; making sense of it is therefore challenging. Fourth, the business model remains a theoretically underdeveloped (and sometimes overloaded) concept, which may raise doubts concerning its usefulness for empirical research and theory building. Future research on business models should seek to overcome these limitations. Scholars need to develop the theoretical foundations of the business model and shed light on its conceptual distinction from other related concepts such as new organizational forms, ecosystems, activity systems, and value chains or value networks. In particular, scholars need to articulate and define precisely which business model concept they propose to use as a basis of study (e.g., archetype, activity system, or cost/revenue architecture). We need more clarity about the theoretical building blocks of the business model, its antecedents and consequences, and the mechanisms through which it works.

Conclusion

The burgeoning literature on business models is young and quite dispersed. It is just starting to make inroads to the top management journals. The conceptual base is still thin, but our review of the literature suggests two ways to advance the study of business models. First, employing more precise concepts would allow other researchers to better understand what the business model in the respective study is meant to denote (and what it is not). Our review suggests at least three concepts that might warrant distinct consideration: (1) e-business model archetypes, (2) business model as activity system, and (3) business model as cost/revenue architecture. These distinct concepts could all be fruitfully investigated—individually, as well as in relation to each other—under the umbrella theme of the business model.

Second, we found that four important themes are forming, primarily around the notions of the business model as a *new unit of analysis,* offering a *systemic perspective* on how to "do business," encompassing *boundary-spanning activities* (performed by a focal firm or others), and focusing on *value creation* as well as on value capture. These themes are interconnecting and mutually reinforcing. This all suggests that the field is moving toward conceptual consolidation, which we believe is necessary to pave the way for more cumulative research on business models.

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