



# Value creation through the evolution of business model themes

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## ARTICLE INFO

### Keywords:

Value creation  
Business model themes  
Business model evolution  
Industry evolution  
Market entry

## ABSTRACT

A conceptual framework is proposed to examine value creation through the evolution of business model themes. A critical assessment of the literature on business models, business model themes, and their evolution is presented. This assessment highlights the fact that business model themes are typically theorized as being static. Instead, the framework presented here characterizes business models and the business model themes of value creation as co-evolving within an evolving industry. The framework provides a set of propositions that specify how firms can create value by entering an industry, reacting to imitators, and co-evolving with product market strategies and with environmental factors. This study contributes to the literature on value creation through business model themes.

## 1. Introduction

Catalyzed by firms' use of digital technologies (Amit & Zott, 2001; Teece, 2010), the notion of a business model accounts for firm success or failure (Zott et al., 2011), offering a complement to the orthodox conceptions of the firm's value chain, resources, and position (Massa et al., 2017). There is a consensus (Foss & Saebi, 2017) that the firm's business model is an "architecture of value creation, delivery, and capture mechanism" (Teece, 2010, p. 172). According to this notion, value creation and appropriation are conceived as a firm's boundary-spanning activity system, conducted by a set of actors linked by transaction mechanisms (Amit & Zott, 2001; Foss & Saebi, 2017; Writz et al., 2016). Such an architecture can be configured to activate one or several themes, or designs, to create value through novelty, efficiency, complementarity, or lock-in (Zott & Amit, 2007). Recent research has advanced the focus from a static understanding of the business model to a dynamic view of the business model (Achtenhagen et al., 2013), its innovation (Foss & Saebi, 2017; Hacklin et al., 2018; Niosi & McKelvey, 2018) and transformation (Kranz et al., 2016). However, such research has focused on the *internal matters* of the business model, the way it is structured with actors and activities, and the way these change (Demil & Lecocq, 2010; Foss & Saebi, 2017). The *transformation of the themes of a business model*, in contrast, has been ignored, despite calls for their further examination (Zott & Amit, 2007). This trend in the literature is unfortunate because casual experience shows that for success, firms may have to address different themes under different contingencies. This notion is illustrated

by Facebook's initially *novel* business model theme, which later evolved into *complementarity* and strong *lock-in* (Boshuijzen-van Burken & Haftor, 2017; Kim & Cha, 2017; Lin & Lu, 2011). The importance of finding the right match between a business model's value creation themes and the marketplace is illustrated by Apple's disruptive launch of the iPhone. This launch singlehandedly generated 92% of global profits in 2015 (van Alstyne et al., 2016). By comparison, when the iPhone was introduced in 2007, Nokia, Samsung, Motorola, Sony Ericsson, and LG collectively generated 90% of the industry's global profits (van Alstyne et al., 2016). This business model disruption was successful, even though the major mobile phone manufacturers enjoyed the conventional industry advantages of strong brands, leading operating systems, optimized supply chains, intellectual property, enormous scale, and massive R&D budgets. A recent study showed that a firm's business model has similar effects to a firm's industry in explaining variation in performance (Sohl et al., 2020).

### 1.1. The need to match business model themes with context

The literature is silent on the core question of *which business model themes contribute to firm success and under what conditions* (Foss & Saebi, 2017; Massa et al., 2017). We focus on this gap in the literature by addressing that very question with an exploratory approach. Answers to this question are of profound significance to managers' efforts to innovate and control a firm's business model. This significance stems from the fact that the business model's themes represent the sources of value

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<https://doi.org/10.1016/j.jbusres.2020.09.007>

Received 15 June 2020; Received in revised form 1 September 2020; Accepted 4 September 2020

Available online 18 September 2020

0148-2963/© 2020 The Author(s).

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creation that a firm should strive to activate. By analogy, answers to the present research question can help direct managers' efforts in business model innovation and transformation. By combining the literature on business models and their themes with the literature on evolutionary economics, focusing particularly on co-evolutionary processes within an industry, this paper presents a novel contingency-based conceptualization of business model themes in an industry context.

Methodologically, we followed the classical approach of knowledge proposition formulation (Dubin, 1978). A theoretical gap was first identified from a detailed literature review. A critical review of all original research on business model themes highlighted a knowledge gap concerning the evolution of such themes. Subsequent use of the snowball approach enabled the review of all studies that cite the original publication. This approach identified the few publications that have addressed this topic. Attention was then turned to the most firmly established theory on evolutionary economics (Nelson, 2018). This theory provided relevant empirical findings in the context of a business model. The theoretical support to synthesize and formulate the present theoretical framework and knowledge propositions was provided. Support for these propositions is offered by illustrations from real-life business situations. The aim of this paper is exploratory and propositional. Therefore, further research is needed to corroborate or refute these propositions. Accordingly, the major limitations of this research lie in the fact that it synthesizes new propositions. This creative process ultimately offers no guarantees (Popper, 1979).

This paper makes several contributions. The first is to allocate an isolated business model construct within the context of an evolutionary economy. This setting provides a grounding theory for business model dynamics, accounting for the fact that a business model can be innovated, changed, and transformed. This paper explains why this evolution may happen. More specifically, the notion of the business model themes is rooted in the context of an evolving industry, where innovation is a key force for change and co-evolution. In such a setting, a firm's business model interacts and co-evolves with a set of factors such as competing business model themes, product market strategies, and environmental dynamics. The second contribution is to introduce a novel distinction between the functional (external) fit between a business model theme and its environment on the one hand, and the architectural (internal) fit between the architecture and the themes of a business model on the other. This articulation enables a characterization of equifinal relationships between these two kinds of fit and dissolves their current collapse, providing a novel conceptualization of the internal and external dynamics of the business model, thereby doing justice to the real-life complexity of business model management. The third contribution is a five-stage framework that characterizes an evolution of the business model themes, their interactions, and their co-evolution. This framework is a starting point to chart the various evolutionary processes that business models may undergo in their industrial context. It offers an initial map of possible states of themes and their changes and can thereby shape managerial decision making. Finally, the content of each proposed stage shows specific ways for firms to enter an industry using the business model and ways to defend against such entries.

The article proceeds as follows. The business model literature is first reviewed to supply the basis for the framework proposed in this paper. The focus is on business model themes as sources of value creation. Evolutionary economics is then reviewed, with the focus on the characterization of the evolution of an industry. A set of knowledge propositions are then formulated, which collectively constitute the framework. The paper ends with a discussion and the conclusions of this research.

## 2. The literature and its limitations

The term *business model* was first used several decades ago (Bellman et al., 1957; Lang, 1947). However, it was not until the turn of the millennium that the notion of the business model became established in

the scholarly literature (Amit & Zott, 2001), seemingly as a reaction to two interacting forces (Massa et al., 2017; Zott et al., 2011). The first force was the shift in global economies (Teece, 2010), driven by factors such as the development and adoption of novel digital technologies (most notably the Internet), the emergence of globalized markets and supply chains, and the harmonization of regulations between markets (EU, NAFTA, etc.). These and other changes enabled novel business practices on an unprecedented scale to drive economic value creation through firms such as Amazon, Facebook, and Google. The second force was the inability of the orthodox theory to account for the sudden massive economic value created by specific firms. As Parker et al. (2016) noted, Apple's successful entry into the mobile phone market cannot be explained by the positioning approach (Porter, 1985) or the resource-based view (Barney, 1991). In fact, according to these theories, success by such firms is quite implausible. Parallel theoretical developments, in contrast, can account for alternative drivers of firm success. Examples of such theories are transaction cost economics (Williamson, 1975, 1979, 1983), strategic networks (Doz & Hamel, 1998; Gulati et al., 2000), Schumpeterian innovation (Schumpeter, 1934, 1942), and externalities (Arthur, 1990; Katz & Shapiro, 1985).

These two forces have led to several efforts to *integrate* various theoretical bodies, yielding a new construct that can be used for analysis of the firm, now understood as the business model (Amit et al., 2011). A recent comprehensive review of the extensive literature on the business model (Massa et al., 2017) classifies business model research into two broad views. At one end, the business model is regarded as the properties of a focal firm and its context, including firm performance and the drivers of that performance. At the other end, the business model is understood as a cognitive schema or thinking pattern that is held by managers in the focal firm and that includes their decision making. Although both approaches have made crucial contributions to understanding business success, the present research is aligned with the former view that a focal firm's business model characterizes the firm's creation and appropriation of value, which in turn conditions firm performance.

The notion of the business model accounts for value creation and appropriation by shifting the focus from the firm itself (Barney, 1991; Porter, 1985) to the firm's boundary-spanning system of activities operated by resources or actors that are linked by transaction mechanisms (Amit & Zott, 2001; Zott & Amit, 2010). The business model is thus built on a multi-actor architecture (Foss & Saebi, 2017; Teece, 2010), where, rather than operating on its own, a focal firm interacts with customers, partners, mediators, suppliers, and others, all of which share a need for value creation and appropriation (Brandenburger & Stuart, 1996). Orthodox theorizations consider value appropriation to originate either in the firm's activities (Porter, 1985) or resources (Barney, 1991) on the supply side only (Massa et al., 2017). By contrast, business model theorizations account for the firm's value appropriation and value creation (Amit & Zott, 2001; Zott & Amit, 2007, 2008) on both the supply side and the demand side of a transaction, including resources and activities, as well as the actor-network configurations with their transaction mechanisms (Massa et al., 2017; Zott et al., 2011).

Initially, the business model was criticized for being a "murky" (Porter, 2001, p. 73) and slippery construct to study (Markides & Charitou, 2004). Inconsistencies and disagreements over its boundaries (George & Bock, 2011; Ricciardi et al., 2016; Ritter & Letti, 2018) arose from different business model definitions (DaSilva & Trkman, 2014; Fjeldstad & Snow, 2018). More recently, however, a consensus has emerged that a firm's business model is the "architecture of value creation, delivery, and capture mechanism" (Teece, 2010, p. 172). This definition advances beyond "a mere list of the firm's mechanisms for creating, delivering, and capturing value and the activities that enable these mechanism" (Foss & Saebi, 2017, p. 215). Here, the notion of *architecture* denotes "the functional relations among those mechanisms and the underlying activities" (Foss & Saebi, 2017, p. 215). This notion accounts for the boundary-spanning and systemic character of the

business model (Amit & Zott, 2001; Zott & Amit, 2010), in the sense of the “fundamental organization of a system embodied in its components, their relationship to each other, and to the environment, and the principles guiding its design and evolution” (Maier et al., 2001, p. 108). Digital technologies can be actors that perform activities and constitute transaction mechanisms in such architectures. An example is Uber’s matching between riders and drivers. This facet explains the enormous potential of new architectural configurations and the value generation enabled by digital technology use (Parker et al., 2016). The crucial systemic character of business models is illustrated by the rise of the streaming giant Netflix, which shifted from providing off-the-shelf content to offering in-house produced content (Park, 2019). By being an early market leader of streaming content provision, Netflix received data on viewers’ habits and preferences so that it could design suitable content and handle its production. This asset enabled it to differentiate itself from the emerging competition, which offered only off-the-shelf content; a differentiation that helped Netflix to attract a broader customer base. In-house produced content made Netflix to sell product placements that generate additional revenues.

In their creative and ground-breaking contribution, Amit and Zott (2001) synthesized key theoretical findings from value chain analysis (Porter, 1985), the resource-based view (Barney, 1991; Wernerfelt, 1984), strategic network theory (Doz & Hamel, 1998; Gulati et al., 2000), transaction cost theory (Williamson, 1975, 1979, 1983), externality theory (Katz & Shapiro, 1985), Schumpeterian innovation theory (Schumpeter, 1934, 1942), configuration theory (Miles & Snow, 1978, 1986), and contingency theory (Donaldson, 1987; Miller, 1992) into the definition of the business model as “the design of transaction content, structure, and governance so as to create value through exploitation of business opportunities” (Amit & Zott, 2001, p. 494–495). According to this definition, the content and structure characterize details of the business model’s architecture, with the business model’s interconnected actors and capabilities linking with transaction mechanisms and patterns to give rise to an activity system. This system is governed with a certain degree of dynamism in relation to internal and external changes to the firm (Foss & Saebi, 2017). Crucially, grounded in both theory and empirical data, Amit and Zott (2001) proposed that a business model architecture can be governed to cover one or several specific *business model themes* (which can also be thought of as designs or configurations) that drive value creation (Amit & Zott, 2001; Zott & Amit, 2007, 2008). Business model themes condition variance in firm performance and thus complement firm-specific, industry-specific, and country-specific effects on firm performance (Hawawini et al., 2003; McGahan & Porter, 2002; Rumelt, 1991; Sohl et al., 2020). Four distinct themes are proposed: *novelty*, *efficiency*, *complementarity*, and *lock-in* (Amit & Zott, 2001; Kulins et al., 2016; Zott & Amit, 2007, 2008). These four themes are the central subject of the present research.

### 2.1. Value creation through business model themes

First, the *novelty-centered* business model is based on creating new ways of doing business (Amit & Zott, 2001; Zott & Amit, 2007), which implies that the actors, activities, and transactions that make up the business model architecture are different or are configured differently from the business model architectures of peers (Amit & Zott, 2001; Zott & Amit, 2007). An example is when eBay disrupted the auctions market with its large-scale customer-to-customer auctions, where low-value items could also be traded successfully, giving rise to a new large-scale market.

Second, the *efficiency-centered* business model is based on comparatively low resource use by some or all of the actors involved in the business model. This efficiency was one of the growth drivers for the streaming music provider Spotify, offering access to virtually endless amounts of music anywhere anytime much more conveniently than alternatives such as Apple’s relatively cumbersome file downloading transaction.

The third is the *complementarity* business model theme, which relies on various ways of bundling or synchronizing offerings (goods or services), activities, or resources, including technologies (Amit & Zott, 2001; Zott & Amit, 2007). Following Kulins et al. (2016), the focus here is on the business model’s complementarity of offerings, where a crucial factor is the ability to create synergies where A generates more value in the presence of B than on its own or in the presence of C (Ennen & Richter, 2010; Milgrom & Roberts, 1995). Complementarity is illustrated by intermediaries such as travel agencies, which offer complementary travel services (e.g., several modes of transport, a range of accommodation, insurance, travel guides, and recommendations).

The fourth business model theme is *lock-in* (Amit & Zott, 2001). The core of this theme is discouraging the actors in a business model (e.g., customers, mediators, partners, and suppliers) to leave the business model and migrate to a competitor. Lock-in can be achieved through sunk costs (Parayre, 1995), which are illustrated by situations where suppliers invest in product development that meets a customer’s unique specific actions but that is less useful to other customers. It is also illustrated through activation of network externalities (Boshuijzen-van Burken & Haftor, 2017) such as Facebook use, where the more people who use it, the more value it provides to its members, who become discouraged from migrating to an alternative.

### 2.2. Business model themes in interactions

These business model themes are neither orthogonal nor mutually exclusive; two or more business model themes can co-exist and interact with each other in one and the same business model (Amit & Zott, 2001). When Spotify launched its streaming music service, its transaction mechanisms were both novel and efficient compared to alternatives in the marketplace (Urbiniati et al., 2019). Spotify’s subsequent attempts to introduce various complementary services such as radio and film have largely been deemed unsuccessful. However, Spotify later succeeded in achieving lock-in, partly because of its brand and interface design and partly from the activation of network externalities through the ability to share playlists with other Spotify users.

Amit and Zott’s (2001) groundbreaking study introduced the notion of the business model and its four value creation themes, and subsequent studies have attempted to confirm the effects of these themes empirically in terms of their effects on firm performance. When regarded as a standalone theme, the novelty theme has been confirmed (Brettel et al., 2012; Wei et al., 2014; Zott & Amit, 2007), as has the efficiency theme (Brettel et al., 2012; Zott & Amit, 2007). In contrast, there has not yet been confirmation of the standalone effects of complementarity or lock-in, other than through isolated case studies (Parker et al., 2016). With regard to combinations of themes, Zott and Amit (2007) showed a weak negative interaction between novelty and efficiency, whereas Kulins et al. (2016) found strong support for a positive interaction between these themes. The latter study also provides empirical support for the performance effect of two other combinations, the first being novelty and lock-in and the second being efficiency, complementarity, and lock-in (Kulins et al., 2016).

Additionally, inspired by contingency thinking, Zott and Amit (2007) provided some empirical support for a potential interaction effect between the novelty-centered business model and the environmental factor of munificence, understood as an entrepreneurial firm’s access to the external resources required for its survival. Zott and Amit (2008) also provided empirical support for the performance-conditioning interactions between business model themes and product market strategies (Porter, 1985). Specifically, novelty-centered business models coupled with either differentiation, cost leadership, or product market strategies based on early market entry enhance firm performance (Zott & Amit, 2008).

### 2.3. Critical assessment

This advancement of the business model concept as a novel analytical construct is promising in its ability to account for today's complexities of business behavior and the conditions that explain firm performance. Studies have shown that business model themes, regarded on their own and in conjunction with each other, explain some of the variance in firm performance. The literature also offers evidence that such variance can be caused by the interaction of a business model theme with other factors. However, current understanding of business models is limited and inconclusive, with several unanswered questions.

One such question relates to the fact that two of the proposed business model themes (complementarity and lock-in) have not been tested as standalone drivers of firm performance. A second gap is that only some combinations of business model themes have been tested, whereas others remain untested. An example is novelty combined with complementarity, which may be observed in various intermediary transaction mechanisms such as industrial procurement platforms that bring together numerous previously independent suppliers (Delafenestre, 2019). A third gap concerns other value-driving factors with which business model themes may interact. Three product market strategies have received empirical support for positive interaction with the novelty theme. However, there is a lack of knowledge about other combinations (e.g., complementarity with a cost-leadership product market strategy). Additionally, there are indications that the environment of a focal firm may interact with its business model themes (Zott & Amit, 2007). Hence, there is a need to ascertain whether any other standalone themes or combinations of themes interact with the firm's environment. A fourth type of limitation concerns the fact that most of the data used for the cited studies are on public entrepreneurial firms, although notably not in the study by Wei et al. (2014). There is a need to understand other kind of firms as well. The logic of a business model, its themes, and their transformations are different in incumbent firms and private firms than in entrepreneurial firms (Dent et al., 2016). For example, incumbent firms often have access to internal resources that entrepreneurial firms do not, and incumbents' transformations are conditioned by path dependency factors that entrepreneurial firms are free from (Cozzolino & Rothaermel, 2018). Unlike public firms, private firms typically have the comfort of making certain efforts (e.g., costs and risks) because they are not subject to short-term owner scrutiny (Acharya & Xu, 2017). Also, several of the cited studies are based on data of e-commerce firms around the turn of the millennium. While this focus was justified at a time when e-commerce was gaining momentum, the development, adoption, and use of various modern digital technologies has advanced well beyond early e-commerce practices. Two examples are omnichannel retailing practices, where multiple customer-facing channels are synchronized into one seamless customer experience (Piotrowicz & Cuthbertson, 2014), and the various modes of e-payment available to customers (Ogbanufe & Kim, 2018). Both practices contribute to reducing transaction costs and thus increase the efficiencies of the actors involved in the business model. As technology development and adoption drives business model innovation, there is a need to account for these new practices and to understand how they condition business model success and firm performance.

Yet another limitation articulated here is that current research on business model themes predominantly takes a *static view* to understanding which themes condition a firm's performance. This view is typically grounded in studies that rely on cross-sectional data from public entrepreneurial firms. While such an approach is suitable for the initial phases of a new research program, it has the limitation of disregarding the temporal dynamics and evolutionary processes that transform business model configurations (Nelson et al., 2018). This disregard poses a challenge for several reasons. First, a strategic initiative in a firm, such as deployment of new technology to establish a new transaction mechanism (e.g., web-based procurement solutions, omnichannel sales, or smart contracting), is typically subject to a time lag

between the introduction of a new business practice and the realization of its benefits. Time lags between two and five years are reported (Brynjolfsson & Saunders, 2010). A cross-sectional study at a given moment is therefore unable to account for these temporal delays and their impacts on firm performance. A second limitation of a static view is that it fails to account for the fact that some firms change their business models and their themes to adapt to emerging external conditions such as changing customer preferences and competitor initiatives, which call for business model innovation (Foss & Saebi, 2017; Zott & Amit, 2015). Again, cross-sectional studies are unable to account for such business model changes. This failure is illustrated by Facebook when it first introduced mediation between members, who are private individuals. Doing so enabled the creation and consumption of information content, which represented novelty and efficiency compared to existing alternatives. Facebook thereafter introduced a fee-based marketing functionality for professional content providers that wanted to expose Facebook members to some specific content. Eventually, as the number of members grew, lock-in mechanisms were activated, both in terms of sunk costs and network externalities (Foss & Saebi, 2017; Zott & Amit, 2015). A final limitation regards situations when one firm simultaneously combines two or more business models (Casadesus-Masanell & Ricart, 2010; Casadesus-Masanell & Tarzijan, 2012; Kim & Min, 2015). A single firm *may combine* different business model themes generated by different business models that are nonetheless operated by that one firm. An example is a car manufacturer that sells cars through traditional car dealer networks and simultaneously offers private leasing options to end consumers (Bellos et al., 2017). A key unanswered question in such situations is, *Are any combinations of business model themes more successful than others?* However, the question of business model combinations falls outside the scope of this paper; the focus here is on firms that use a dominant business model.

In summary, emerging business model theorizations offer a novel conceptualization that accounts for variation in firm performance and thereby complement existing conceptions of firm strategy and industry. This research stream is still in its initial phases, and there are several unanswered questions. The following section presents a novel framework for the conception of business model themes in the context of an evolving industry where the business model is implemented. This framework includes a set of research propositions that are aimed at orienting research to fill some of the gaps identified here.

### 3. Conceptual framework

The above review of the current state of knowledge of business model themes shows that conceptions of these themes as drivers of value creation are useful in explaining variation in firm performance, yet the current understanding of these themes is scattered at best. The dominance of cross-sectional studies provides only isolated snapshots of business model themes at work, overlooking the evolution of such themes. Such an evolutionary understanding may uncover patterns of theme changes in successful business models.

An evolutionary understanding of business model themes has unintentional support from two empirical studies. One study shows that the same business model theme is activated differently at two different times depending on environmental conditions (Zott & Amit, 2007). More specifically, the data show that efficiency was successful in Q4 of 1999, when the market was booming, but unsuccessful in Q4 of 2000, when recession hit the market (Zott & Amit, 2007, p. 191). This finding has at least two implications. First, the efficiency theme is more successful during recession. Second, and more generally, environmental dynamics interact with business model themes in a contingent fashion. A second study has shown that a business model explains more of the variation in a firm's performance immediately after the firm's market introduction than when the firm has operated its business model for several years. This track record generates experience and learning of how to operate a business model (Sohl et al., 2020). The study also highlights the

importance of changing and evaluating a firm's business model. This evolutionary character of business models and their themes is further discussed in several studies (Balboni et al., 2019; Chester et al., 2020; Schaltegger et al., 2016; Zollo et al., 2013).

Given this background, the first contribution of this paper is to embed the notion of the business model and business model themes within the notion of an evolutionary economy. According to Nelson (2018, p. 2–3), “the root of the difference between evolutionary economics and economics of the sort presented in today's standard text books is the conviction that continuing change, largely driven by innovation, is a central characteristic of modern capitalist economies, and that this fact ought to be built into the core of basic economic theory.” This view reflects the intention of this study, namely, to build an evolutionary notion into the conception of business model themes. The core idea of an evolutionary economy is summarized next, followed by a characterization of the evolution of an industry, the latter providing the context for the evolution of business model themes proposed subsequently.

### 3.1. Evolutionary economy as the context for business models

Neoclassical economics has at its core stability and equilibrium (supply, demand, product, prices, competition, and markets) under the assumption of rational and optimal decision making and behavior of economic agents. Building on the insights of Adam Smith, Schumpeter, and generalized Darwinism (Hodgson & Knudsen, 2006), evolutionary economics holds that human decision making and behavior is not necessarily optimal but is instead often biased and restricted by various cognitive, emotional, social, and historical factors. Meanwhile, humans are motivated, imaginative, and quick to learn, driving innovation and improvement, which in turn enables change, competition, and therefore evolution. Innovation offers a temporary monopoly over the use of newness, but, if successful, it is soon copied and surpassed (Nelson, 2018). In short, evolutionary economics views an economy as always in motion, just as its context is always in motion in the form of cultural evolution (e.g., Mesoudi, 2011).

### 3.2. The evolution of industries

With its business model, a firm operates through interactions with buyers, factor market actors, forwarders, competitors, and regulators, all of which influence and are influenced by the formal and informal institutions in an industry (Nelson, 2018). Hence, the success or failure of a firm is to a certain degree conditioned by its industry (Rumelt, 1991). The orthodox understanding of an industry is static and focuses on its equilibrium, where determinants of industry outputs, the way they are produced, and their prices are investigated. The assumption is that a firm's key task is to compete through prices and by productivity optimizations to give buyers value (Besanko et al., 2010). This view disregards novelty and radical change.

Evolutionary economics regards such an understanding as too restricted because empirical experience shows that new industries emerge, change, and decline (Pyka & Nelson, 2018). Details of the evolution of an industry differ depending on the focal industry (e.g., fashion vs. pharma), yet research shows that industries tend to have some common characteristics in terms of structure and dynamics (Klepper, 1997; Klepper & Graddy, 1990; Utterback, 1987, 1994). Industry evolution creates path dependencies for industry actors, which condition firm success or failure. Evolutionary economics therefore holds that understanding a firm's success requires an understanding of the firm's industry, the evolution of that industry, and the evolution of the focal firm and how it co-evolves with actors and factors in its context (Pyka & Nelson, 2018). That view, unlike the orthodox view, acknowledges that firms in an industry innovate and adopt new technologies, motivated by potential rewards. This innovation and adoption generates processes that can give rise to turnover in industry leaders and to the

creation of new industries (Utterback, 1987). Evidence shows that industries may be effectively characterized by typical stages or phases: birth, growth, maturity, and decline (Klepper, 1997). The birth of an industry occurs as new kinds of offerings are provided to satisfy some latent need in the marketplace. More generally, this provision of new offerings reflects new kinds of technology with a range of possible valuable uses (Rai & Tang, 2014; Utterback, 1987). An industry is initially dominated by small firms, both newborns and migrants from other industries, with the latter possibly being large firms (Klepper & Graddy, 1990). The pioneering firms experiment widely in terms of the design of offerings, the setup of delivery (processes, organization, and factor markets), and the value capture mechanism, all searching for a market fit (Pyka & Nelson, 2018). As the industry develops and grows, more actors are attracted, the scope of available offerings increases, and so do the technology variations used. Greater competition among firms follows, which may give rise to various subcategories of offerings and niches (Garcia-Sanchez et al., 2013). Given certain conditions, this branching may result in one or a few dominant designs for offerings, delivery, and the means of value capture (Pyka & Nelson, 2018). Many firms fail, while some firms succeed to grow their revenues, profits, and number of employees. This maturing process motivates firms to switch their focus from the experimentation of what to provide to the marketplace to the optimization and productivity of what is provided and how it is provided (Levinthal & Myatt, 1994). This process also leads to greater specialization of firms, the emergence of new niche firms, and the emergence of new kinds of suppliers (Tan & Tan, 2004). There are two known key forces that drive the subsequent consolidation of an industry: superior productivity through economies of scale and scope (Levinthal & Myatt, 1994) and the ownership of a dominant design of a product or production means (Raff, 2000). These two, along with patents in some industries, constitute barriers to entry for other firms. The dominance of a few leading firms in an industry may in turn trigger the innovation of new products, production means, and organizations, motivated by potential rewards (Garcia-Sanchez et al., 2013). In some industries, at least two key factors may hinder industry consolidation. One is the presence of greater diversity of buyers' needs and wants, such as in the pharmaceutical industry, with thousands of illnesses and symptoms (Pyka & Nelson, 2018). The second is the ability for the vertical disintegration of value chains (Macher et al., 2002), either by equipment providers such as in the computer hardware industry or by niche entrants such as in the current financial industry (Malerheat et al., 2016). Crucially, what buyers want is influenced substantially by what they have bought and by what others buy (Pyka & Nelson, 2018). Learning to use a certain offering influences subsequent buying decision, which are also influenced by the compatibility of offerings with those that others use, along with the network effects of some offerings (Katz & Shapiro, 1985).

Crucially, studies of industries and their change, evolution, and destruction typically focus on the innovation of products and services, production processes, organizations, governance, and the sourcing of inputs (Casadesus-Masanell & Zhu, 2013). There is no research on how industries transform due to business model innovation through the transformation of business model themes (Casadesus-Masanell & Zhu, 2013; Foss & Saebi, 2017; Hacklin et al., 2018; Ricciardi et al., 2016), which is the focus of this paper.

### 3.3. Architecture versus functionality of a business model

The emergence and evolution of an industry seem to follow similar evolutionary steps. New actors identify latent opportunities in a marketplace, which attract them and motivate their innovation. These opportunities are often associated with the adoption of new technologies. Such innovations generate a variety of offerings, delivery means, and approaches to value capture. The initial variations of these setups seek a market fit, a process that generates experience and learning. This process is followed by adaptation and the selection of those that fit

better than others. This description applies not only to product market fit or production process fit but also to business model fit (Foss & Saebi, 2017; Saebi, 2014). In reference to generalized Darwinism (Aldrich et al., 2008), a second contribution of this paper is to introduce a novel distinction within the notion of business model fit, whereby a business model's *functional fit* is differentiated from *architectural fit*. This dichotomy can also be thought of as *external fit* versus *internal fit*. As in the case of an organism, functional fit reflects the degree of alignment between a business model's overall functioning and the environment with which the business model interacts. In the present case, overall functioning is represented by the four business model themes, such that the fit is between one or more themes and the environment. Architectural business model fit, on the other hand, refers to the degree to which the architecture of a business model supports the overall functioning of the business model in its realization of one or more themes. The architecture has an internal logic whereby its constituent parts interact in a complex manner to generate the emergent functioning of a business model (Demil & Lecocq, 2010; Markides, 2015; Sohl et al., 2020). This new distinction of two kinds of business model fit recognizes the equifinality (Bertalanffy, 1969) of a business model's overall setup within the environment. More specifically, there are typically multiple possible relationships between a business model's environment, functioning, and architecture. A specific business model theme, or a configuration of several themes, may be achieved through more than one business model architecture. This situation arises, for example, when two firms compete with the same business model themes and product market strategies, but one firm decides to outsource some key activities that the other firm pursues on its own. Similarly, the same configuration of business model themes may fit two or more environmental structures. Crucially, the literature on business model change (Kranz, et al., 2016), innovation (Foss & Saebi, 2017), transformation (Dent et al., 2016), and dynamics (Amit & Han, 2017) predominantly focuses on internal fit and thus ignores the fit between a business model's functioning in terms of the business model themes and the environment. This gap is targeted here.

The aim of this focus on the *fit* between business model themes and their environment is to identify patterns of business model theme *transformations* that characterize successful fit in a given industry. The suggestion is that in the initial phases of an industry lifecycle, under certain conditions, some combinations of business model themes may have better fit than other themes. However, in other situations with other conditions, other themes may have better fit with the environment. This notion of evolution of successful business model themes depicts the business model in terms of a system's functional fit with the environment, which recalls the established notion of an organization's fit with the environment as assumed specifically in contingency theory (Donaldson, 1987), general systems theory (Bertalanffy, 1972), and evolutionary economics (Nelson et al., 2018). This notion enables the conceptualization of a given business model so that its specific functionality (i.e., theme) is decoupled (Yang & Zheng, 2011) from its specific internal architecture. Again, the potential of uncovering successful business model theme evolutions is that the analysis focuses not on a specific firm's internal setup but on the functionality produced jointly by a network of actors that constitute a business model operating in an industry. Accordingly, an uncovered pattern may be pursued by different firms during different periods.

### 3.4. Propositions

In a mature and stable market, where a number of firms compete with various product market strategies (e.g., low-cost and differentiation), there is typically one or a small number of dominant business model configurations used by those firms, accompanied by some niche firms (Helfat & Raubitschek, 2000). For example, in the mid-1990s, the personal computer industry had firms that pursued both differentiation and cost efficiency. Some focused on certain niche segments, although virtually all pursued a similar business model, which was characterized

by “making-to-inventory and shipping-to-outlet” (Kraemer et al., 2000). Entering such an industry is likely to succeed for firms that innovate a business model by exploiting a new technology in relation to existing firms in the industry. Again, the novelty theme refers to innovation in the constellations of actors involved, activities performed, transaction mechanisms used, and governance models adopted in a business model (Amit & Zott, 2001). Such successful novel business model entry is supported by studies that disregard the nature of the industry (Amit & Zott, 2001; Zott & Amit, 2007). However, one study recognizes the crucial importance of available technological innovation (Wei et al., 2014). DELL's entry into the personal computer industry illustrates this importance, with an Internet-mediated “make-to-order and ship-to-customer” novel business model, which disrupted the industry. These arguments support the following proposition:

**Proposition 1a.** *A stable industry that is exposed to relevant new technology is more prone to be successfully disrupted by the novelty business model theme than by any other theme.*

On the other hand, a stable and mature industry that is not exposed to relevant new technology but experiences recession that generates economic stress on actors in the industry is more likely to be disrupted by a business model that offers actors greater efficiency, as suggested by Zott and Amit's (2007) inconclusive findings. An illustration is the large number of intermediaries in the travel industry, which aggregate accommodation and transport options to simplify buyers' search and selection (Alford, 2000). These arguments support the following proposition:

**Proposition 1b.** *A stable industry that is exposed to recession is more prone to be successfully disrupted by an efficiency business model theme than by any other theme.*

A third industrial factor assumed here to positively condition industry disruption by a business model is major *institutional change*, which covers both formal regulatory change and informal normative transformation (Aoki, 2007). The former is illustrated by the deregulation of state monopolies such as airline traffic, electricity production, and telephone network provision. Experience shows that such deregulation triggers the emergence of new firms with new business models (Kshetri, 2007). Institutional change may be subtler, such as changes in buyers' preferences (Pyka & Nelson, 2018). Illustrations are the ongoing emergence of sustainability norms, which encourage car manufacturers to launch electric cars, and the shift from private car ownership to private leasing (Bellos et al., 2017). These arguments support the following proposition:

**Proposition 1c.** *A stable industry that is exposed to key institutional change is more prone to be successfully disrupted by a novelty business model theme than by any other theme.*

The early entry period is followed by a growth period of the new industry (Pyka & Nelson, 2018). Successful entries of business models attract competition from both startups and incumbents that transform their business models, both of which imitate the pioneers (Helfat & Raubitschek, 2000). Examples include the cases of DELL (Kraemer et al., 2000) and Spotify (Mähler & Vonderau, 2017), where numerous firms have since imitated these new business models. These arguments support the following proposition:

**Proposition 2.** *Successful entries of business models are imitated by competitors, both by start-ups and incumbents' transformation of the existing business models.*

The growing number of followers erodes the value of pioneers' business models (Foss & Saebi, 2017), which leads to two kinds of reactions. First, pioneers of new business models that manage to impose sunk costs on partaking actors or initiate activation of network effects will have transformed their business model theme into lock-in. They will then seek to accelerate that transformation, and, where possible, they

will focus on strong network effect activation, as demonstrated by Facebook (Kim & Cha, 2017) and Spotify (Mähler & Vonderau, 2017). These arguments support the following proposition:

**Proposition 3a.** *Greater competition from newcomers that imitate pioneers’ business models using the novelty theme or the efficiency theme will cause some firms to transform to the lock-in theme business model.*

A second kind of reaction to followers’ imitations of novelty or efficiency is the complementarity business model theme. This theme is achieved by creating portfolios of interaction content with one or several actors in the business model. A typical instance is the bundling of offerings provided to buyers (Kulins et al., 2016), as when Spotify reacted to imitators by including streaming of radio and film. Such bundling has the potential to both increase efficiency of the business transaction itself (Amit & Zott, 2001) and differentiate the focal firm’s offering from that of the competition. Both effects may attract buyers (Pyka & Nelson, 2018). DELL also reacted to imitators by expanding its product portfolio to include personal computer peripherals such as docking stations and printers (Kraemer et al., 2000). These arguments support the following proposition:

**Proposition 3b.** *Greater competition from newcomers that imitate pioneers’ business models using the novelty or efficiency theme causes some firms to transform to the complementarity business model theme.*

The emergence of the complementarity business model in the industry will, again, trigger imitations of the pioneers of the complementarity theme and thus erode their value and appeal (Niosi & McKelvey, 2018). This erosion will then lead to competition of different bundles, where firms seek to differentiate themselves to attract buyers. Examples have occurred in both the personal computer industry, where DELL’s bundle was copied by Hewlett-Packard and other firms (Kraemer et al., 2000), and in the music streaming industry, where Spotify’s dominant position was attacked by Pandora, Amazon Music, Apple Music, and Google Play (Vonderau, 2019). These arguments support the following proposition:

**Proposition 4.** *Pioneers of the complementarity business model theme will be imitated by different bundles, causing pioneers to react by offering new bundles.*

When the established business model has activated strong network effects, with one or a small number of firms beginning to dominate the industry, latecomers will struggle to grow and survive (Parayre, 1995; Parker et al., 2016). This scenario is illustrated by Facebook’s monopoly, based on the activation of strong network effects, and by the operating systems for mobile phones, where Apple and Google have succeeded yet Microsoft has failed, despite its considerable resources (Kim & Cha, 2017). If such industries have a high degree of variation of customer needs, a successful firm entry is most likely to adopt a business model like the one employed by the dominant actors in the industry, while simultaneously employing a narrow niche product market strategy. In the social network industry, Facebook is the dominant firm, providing a generic social network service to its billions of members worldwide. Several well-conceived niche firms, however, have succeeded in entering the industry, including LinkedIn, through its professional affairs services, and ResearchGate, through its networking services for researchers. Such firms have highly customized offerings that are highly

differentiated and are aimed at actors that partake in the business model (Besanko et al., 2010). These arguments support the following proposition:

**Proposition 5a.** *In industries with high variation in customer needs that are dominated by one or a small number of firms with strong network effects, successful entry with a similar business model is combined with a niche product market strategy.*

Industries with a few dominant actors, typically due to activation of the lock-in theme, can be understood in terms of their respective factor markets, which have either high or low diversity (i.e., the number of input providers). For example, Facebook has a very diverse factor market because its members are both the consumers and the producers of the content it mediates (Kim & Cha, 2017). The factor markets of Netflix and Spotify, however, have relatively low diversity because there is a small number of providers of input compared to the number of consumers of the output (Jenner, 2016; Vonderau, 2019). Such an industry can be entered successfully using similar business models accompanied by a differentiated product market strategy, when the content of the offering is sourced exclusively from the factor market or is internally sourced. An example of this approach is the film streaming industry, where Netflix’s initial streaming of off-the-shelf content was imitated by followers. This imitation led Netflix to react by producing its own unique content, thereby differentiating itself from imitators. This response led to continued customer attraction. Similarly, the recent establishment of Disney + subscription video on demand streaming is based on Disney’s own production of content, which guarantees exclusivity and thereby differentiation. These arguments support the following proposition:

**Proposition 5b.** *Industries with few dominant actors and factor markets with low diversity can be successfully entered with similar business models combined with a differentiated product market strategy.*

These propositions present a five-stage evolutionary process of the transformation of business model themes. This process describes how business model themes interact with product market strategies and industry factors: availability of technology, macroeconomic conditions, and institutional changes. The focus of these interactions is on the co-evolution of the business model themes of a focal firm with those of competing firms. Table 1 provides an overview of the evolutionary process described here.

#### 4. Discussion and conclusions

Since the turn of the millennium, firms have succeeded in creating economic value on an unprecedented scale (Parker et al., 2016). Orthodox theories have proved ineffective at explaining this value creation, triggering rise to a notion of the business model to explain variation in firm performance (Massa et al., 2017), and thereby complementing, market-, firm- or industry-specific factors (Hawawini et al., 2003; McGahan & Porter, 2002; Rumelt, 1991). A focal firm’s business model is conceived as a firm-boundary spanning architecture, where several actors engage in activity systems linked with transaction mechanisms (Amit & Zott, 2001; Foss & Saebi, 2017; Teece, 2010). The key tasks of such architectures is to create, deliver, and appropriate value. A central feature of the business model is the business model theme (Amit & Zott,

**Table 1**  
Summary of the propositions and the evolutionary relationships they describe.

BMT & PMS	Pioneers (time 1)	Followers (time 2)	Pioneers’ reactions (time 3)	Followers (time 4)
Business model theme	New technology → Novelty Recession → Efficiency Institutional change → Novelty	Imitation Imitation	Complementarity Lock-in	Complementarity alternative bundling
Product market strategy	No change	No change	High-variation of customer needs → Niche differentiation Low-diversity factor markets → Differentiation	

2001). The business model architecture can be configured in such a way as to activate one or several of the four known value creation themes (Zott & Amit, 2007, 2008). The empirical literature on business model themes takes a static view, with several studies reporting seemingly unrelated findings regarding the success and failure of these business model themes. In response to an inconclusive empirical study (Zott & Amit, 2007) implying that a business model theme may be more successful in some contexts at a certain time than in other contexts at another time, this study contributes to the literature by presenting a novel framework for the conception of business model theme success.

The first contribution is to anchor the business model and its themes in the context of evolutionary economics in general and in an evolving industry in particular. By bringing together the literature on business model themes and evolutionary economics, a business model and business model themes operate in a context of an evolving industry, rather than in a static vacuum.

A second contribution of this research is that it establishes a novel distinction between the *functional fit* and the *architectural fit* of a business model theme. The former focuses on the contingent fit of a given theme with its contextual factors, whereas the latter focuses on the structural fit of the architecture of a business model with its theme. The importance of this distinction lies in the decoupled and equifinal relationship of the two. The same theme may fit with several contextual conditions, and the same theme can be present in conjunction with several other themes. Although the literature on the business model architecture and its transformation is growing, little has been reported on the evolution of business model themes in their context. The focus of this study addresses this gap.

A third contribution is to provide a framework for the transformation of business model themes in their context, as presented in Table 1. There are five stages of industry and business model themes that represent a fit with several contextual factors, which include availability of new technology, macroeconomic trends, institutional change, and product market strategies. Finally, the key contribution of this study is to provide a set of specific ways to enter a market with a business model and to defend a business model against imitators.

Future studies should extend the proposed framework with the specified ways of managing a business model theme in an industry. They should also empirically test the validity of these propositions and the underlying evolutionary approach to conceiving business models and their themes for economic value creation.

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