CHAPTER 2

Leading Business Model Research: The Seven Schools of Thought

Abstract This chapter examines how business model research has been addressed in the past by presenting the seven dominant schools of thought on business models. Each of their theoretical background particularly enables us to understand patterns, causal and logical relationships, as well as processes of business models. By analysing a case from the perspective of each school of thought, the schools are portrayed in a comprehensive manner. In addition, commonalities, overlaps, and differences such as their demarcation from strategy research are discussed. The chapter rounds off in building the bridge to the subsequent chapters of this book and highlighting the role of theories for explaining the phenomenon.

Keywords Review of business model/business model innovation literature • Theoretical background • Realist view • Cognitive view on business models • Business model theories • Business models and strategy • Phenomenon-driven research • Theoretical paradigm shifts

Business model research has been intensified significantly in the last decade. The field seems to have emerged into its own discipline, building on the established areas of strategic management on the one side, and technology and innovation management on the other side. The emergence of business model research into its own discipline can be viewed as an early phase in which different schools are developing and merging. We present a selection of seven research groups that have attained prominence because

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of their innovative approaches or theoretical input on business models. Before providing a preliminary discussion on the leading business model research, an overview of the seven schools of thoughts is given.

2.1 Activity System School (IESE Business School and Wharton School of the University of Pennsylvania)

A business model is a set of interdependent activities spanning firm boundaries

The authors define a business model as 'structure, content and governance of transactions' (Zott & Amit, 2008, 2010). Content refers to the selection of activities that are performed to deliver the value proposition. The structure of an activity system refers to how these activities are delivered and interlinked, that is, how the required capabilities, activities, and processes add up to deliver and distribute the value proposition. This dimension thus primarily refers to the organization and architecture of the value chain activities, and 'it also captures their importance for the business model, for example, in terms of their core, supporting or peripheral nature' (p. 220). Ultimately, the activity system's governance defines who performs which activities.

Inherent to this approach, Amit and Zott (2001) undertake a first attempt to link economic theories to the value-creation activities of a business, namely transaction cost economics, Schumpeterian innovation, the resource-based view (RBV), and strategic networks. In doing so, they describe four main sources of value creation anchored in business models with relationships to the renowned economic theories, namely efficiency (transaction cost economics), novelty (Schumpeterian innovation), complementarities (rooted in resource-based theory), and lock-in (strategic networks). By this, they present design themes as the holistic gestalt of a company's activity system and suggest the NICE framework (novelty, lock-in, complementarities, and efficiency).

In addition, they contribute to research on business models by studying the contingency relationship between strategy and structure in order to explore the fit between a business model and product market strategy (Zott & Amit, 2008). Based on previous works, such as Porter (1985) and Lieberman and Montgomery (1988), three product market strategy choices are identified: cost leadership, differentiation, and timing of entry into a market. Their quantitative empirical research yields several contributions.

First, while differentiation and cost leadership are mutually exclusive (or else the 'stuck in the middle' situation emerges), novelty and efficiency are complimentary. Second, the business model and product market strategy have a good fit. Third, the impact that the business model has on the product market strategy is clear and considerable. Fourth, the authors discover that business model design and the development of a product market strategy can occur simultaneously. Nevertheless, the authors argue that not enough research is being undertaken on how a product market strategy and the innovation of a business model coevolve.

Zott and Amit further develop their research on business models by contributing a paper to the *Long Range Planning* Special Issue in 2010 about the different constituent parts of a business model (Zott & Amit, 2010). By building on previous work, they develop the activity system perspective, as depicted in Fig. 2.1. The activity system can be described by design elements and design themes. Design elements characterize the activity system and include the content, structure, and governance of an activity system as noted above. An activity system can also be characterized by design themes, which detail the dominant value creation drivers. The central design themes that connect the elements of an activity system are the following: novelty, lock-in, efficiency, and complementarities.

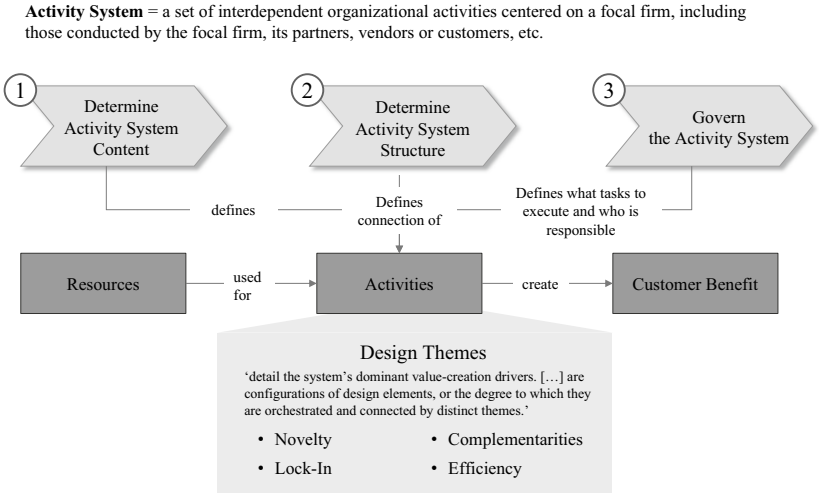


Fig. 2.1 Activity system perspective on business models as presented by the research group around Amit and Zott

The research group was enlarged by Massa in 2011, when they released a literature review (Zott, Amit, & Massa, 2011). Four main observations of general consensus are clarified. First, the business model has gradually become a new unit of analysis. Second, the business model emphasizes a system-level, holistic approach towards explaining how firms do business. Third, organizational activities play an important role in the various conceptualizations of business models. Fourth, the business model seeks to explain how value is created and captured. A solid, common conceptual base is still lacking, to which Zott et al. (2011) make two suggestions for improvement. First, the topic of a business model needs more precise constructs upon which all researchers could agree. Second, some researchers perceive business models as a systemic perspective on how to do business, while others see them as sources of value creation. Both interpretations are mutually beneficial. Hence, distinguishing between these views could be a way to structure the topic and provide clarification. It is argued that these two suggestions would improve the research of business models by bringing a conceptual consolidation among researchers throughout the world.

The Activity system school focuses on a thorough theoretical base in business model research. This research group has managed to push a first approach towards a theory of business models. The so-called activity system perspective on business models is a widely accepted framework within academia. It is based on the ideas of integrating aspects from value chain analysis, the RBV, theory of strategic networks, as well as transaction cost economics.[1]

2.2 Process School (IAE Business School)

A business model is a dynamic process of balancing revenue, costs, organization, and value

Demil and Lecocq (2010) stress the importance of dynamics that affect the development of a business model. First, the authors highlight three core components of a business model, namely *resources and competencies*, *organizational structure*, and *propositions for value delivery*. Trying to structure a business model according to these components points to sources of revenues and helps identify cost drivers. By explaining the relationships between the three components and their respective revenue streams and cost structure, the authors develop a framework they

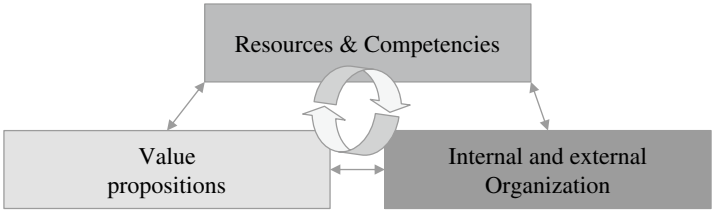


Fig. 2.2 RCOV framework of the process school (Adapted from Demil and Lecocq (2010))

call resources, competencies, organization, and value (RCOV) proposition. Demil and Lecocq (2010) contribute to business model research by pointing out that the relationships between the components are the subject of dynamic change, and that looking at a specific business model at a certain point in time merely provides a snapshot of the current situation. Changes to the model may occur within or between the components. A development *within* is hereby defined as a change of a component that initiates another change in the same component, whereas a change *between* components always affects at least two components. Moreover, the environment can be regarded as an exogenous factor to the RCOV framework with an influence on either of the core components (Fig. 2.2).

In this way, the authors combine the static view on business models, 'which aims to describe the configurations of elements producing (or not) good performance, and the dynamic view, which tries to grasp the ways in which a business model evolves over time' (p. 242). According to the authors, anticipating and reacting to the 'consequences of evolution in any given component' (p. 230) is a capability crucial to build and maintain sustainable firm performance. Moreover, change in a business model might occur on purpose and voluntarily or as an unintended emerging change. These emerging changes can either be positive, such as low interest on borrowings, or negative, initiating vicious circles, like an explosion of salary costs. Hence, even if top management does not purposefully decide to transform the business model, it might still change, thereby affecting elements and core components. Following the authors argument, a business model is, therefore, 'permanently in a state of transitory disequilibrium' (Demil & Lecocq, 2010, p. 240), which means it tries to adapt and aims to eliminate inefficiencies and improve the exploitation of resources.

The research group around Demil & Lecocq, in addition to the introduction of a dynamic perspective of business models, contributes

to research by asking whether a business model can be viewed as a research program, a term coined by Lakatos (1971). Lecocq et al. (2010) define a research program as a stream of theories that show certain continuity even if some of the theories are questioned or even contradicted by other observations. Such a research program, therefore, is constituted by a non-falsifiable core around which auxiliary hypotheses form a protective belt. Lecocq et al. (2010) show that research on BMI may be viewed as a 'business model program' (p. 217). The business model program concentrates on certain core assumptions, which distinguish it from other strategic management programs. For example, the focus is 'on the generation of value and revenues and less on the construction of a competitive advantage' (p. 217) or 'the fact that products and organizational architectures are jointly considered and influence each other' (p. 217). Furthermore, the authors name some of the ancillary, protective hypotheses of the program that are debated but not yet accepted as core assumptions. Examples include Maloneetal. (2006), who investigates the 'kind of relationships between the different elements and the various configurations' (Lecocq et al., 2010, p. 218). Through this classification of BMI as a research program, the authors bring greater clarity to the state of the research on business models and provide a useful framework to structure the existing literature.

Demil, Lecocq, and colleagues make two important contributions in business model research. First, Lecocq et al. (2010) attempt to structure the topic of business models and anchor it in economic research by explaining why business models can be seen as a research program. Second, they attempt to point out the importance of pledging a more holistic perspective on the topic by combining the static and dynamic views on business models. They argue that business models are subject to continuous internal and external change and, therefore, are in a permanent state of disequilibrium. Scholars following this research group are thus increasingly following a dynamic capabilities perspective on business models.[2]

2.3 Cognitive School (Cass Business School)

A business model is a 'model' or the 'logic' of how firms do business

The activities of the research group around the author Baden-Fuller are distinguished by a rather cognitive stance. Following the seminal paper *Business models as models* (Baden-Fuller & Morgan, 2010), this research not only regards business models as tangible frameworks or tools but also takes a first step to interpreting business models as both abstract ideal types and story-telling constructs. In this context, business models may serve as imitable blueprints for managers.

In Baden-Fuller and Morgan (2010), the authors suggest opening up the focus and approach business models from outside the subject area of management. The crux of the matter is the term *model*, which has been conceptually rooted in the fields of philosophy, biology, and economics. Stretching the conceptual experiment to adopt notions from different disciplines, the authors consider business models with an approach normally used by, for instance, biologists. To illustrate the point, biologists study laboratory mice not for the point of studying mice but for studying the life form they represent: mammals. By the same logic, one firm can be studied to analyse a *genre* of firms. In another way of interpreting models, the authors point out that since all firms share certain similarities, generic kinds of behaviour can be traced to simplify the analysis (named *scale models*), and *role models*—that is, something to be copied–can be identified. A last proposition is to consider business models as results of recipes: practical models of technology that are ready not only for copying but also for variation and innovation. In this metaphor, the ingredients of those *recipes* would be resources, capabilities, products, customers, technologies, markets, and so on.

The 2010 paper of the research group continues exploiting this theoretical background and builds on former research. For instance, Baden-Fuller and Winter (2007) previously introduce the notion of principles and templates for replicating organizational knowledge within multi-unit firms wherein a template 'is a working example of an organizational process in use, considered as a repository of process knowledge that is potentially subject to copying' (p. 10.) Principles, on the other hand, 'capture knowledge at a deeper level than templates; that is they indicate what factors can produce which anticipated effects, and an appreciation of why' (p. 11). In this same vein, the research group now uses the business model as a central unit of analysis and stresses the possibility of replicating, adopting, or copying business models (Baden-Fuller & Morgan, 2010) (Fig. 2.3).

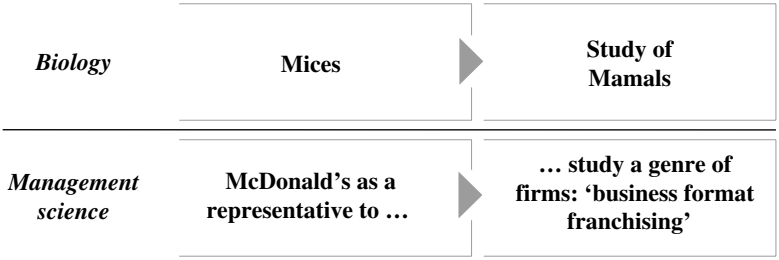


Fig. 2.3 Transferring the idea of 'ideal types to study' onto business models

In a more recent paper, Baden-Fuller and Haefliger (2013) enquire as to how technological innovations and business models are related, and notice that even though both are strongly interlinked, the business model construct is essentially separable from technology. According to the authors, this observation causes confusion among academics and practitioners and needs to be studied more closely by identifying the relationship between business models and technology. A literature review reveals two conclusions. First, using a framework composed of customers, customer engagement, value, delivery, linkages and monetization, business models mediate the link between technology and firm performance. Second, 'developing the right technology is a matter of a business model decision regarding openness and user engagement' (p. 419).

Baden-Fuller and colleagues follow a model-based view on business models and draw on insights from other research disciplines (e.g. biology, philosophy, and economics). Central to this effort is detecting typologies and taxonomies in the field of business models. In this regard, they put the entrepreneur or manager and their entrepreneurial pathways of designing business models in the centre of their considerations. In addition, they strive to build a bridge from technology management literature streams to business models.[3]

2.4 Technology-Driven School (University of California, Berkeley)

A business model is a way to commercialize novel technology

The research group around Henry Chesbrough and David J. Teece shares a common ground by exploring the role of the business model in commercializing technology. However, they examine this matter in different but complementary ways. Chesbrough focuses on how to commercialize new technologies primarily by analysing spin-off strategies (Chesbrough & Rosenbloom, 2002; Chesbrough, 2009) and open business models (Chesbrough 2006, 2007b) on the one hand. Teece, on the other hand, draws on the *profiting from innovation framework* (Teece, 2010, 2012) and the role of dynamic capabilities in designing viable business models (Teece, 2010; Leih, Linden, & Teece, 2015). Hence, both authors adapt their very own theoretical background onto the concept of business models: Henry Chesbrough, by focusing on organizational matters and David J. Teece, by adopting the theory of dynamic capabilities. Both streams are presented in the following:

Chesbrough and Rosenbloom (2002) were one of the first to explicitly study business models. In the seminal paper on Xerox's technology spin-offs, they explored the role a business model takes in capturing value from early-stage technology ventures. Chesbrough and Rosenbloom (2002) present six different functions a business model should possess: value proposition, market segment, value chain, cost structure/profit potential, value network, and competitive strategy.

Chesbrough was also one of the first to introduce the concept of *open business models*. Chesbrough (2006, 2007b) proposes that incumbents should open up their traditionally closed business models because a stronger collaboration with partners helps a firm to find and seize novel, external opportunities. Conceptually, the open business model extends the concept of openness from the innovation and value creation context to all aspects of a business model.

In discussing barriers to BMI and open business models, Chesbrough (2010) comes up with qualitative research on potential ways of circumventing the usual internal barriers. To overcome resistance, that is, the *dominant logic*, or the hurdle to focus on entirely new models, the author first notices that discovery-driven planning could model the uncertainties and update financial projections. Second, he points out the relevance of

Value Proposition	"Articulate the value created for users by the offering based on the technology"
Market Segment	"Identify the users to whom the technology is useful and for what purpose, and specify the revenue generation mechanism(s)"
Value Chain	"Define the value chain required to create and distribute the offering, and determine the complementary assets needed to support"
Cost Structure/ Profit Potential	"Estimate cost structure and profit potential producing the offering, given the value proposition and value chain structure chosen"
Value Network	"Position the firm within the value network linking suppliers and customers, identify potential complementors and competitors"
Competitive Strategy	"Formulate the competitive strategy by which the innovating firm will gain and hold advantage over rivals"

Fig. 2.4 Business model components according to the Technology-driven school (Adapted from Chesbrough and Rosenbloom (2002, pp. 533–534))

effectual logic to innovating business models, following actions based on initial results of previous experiments (Fig. 2.4).

In order to explore the same research question of how business models may successfully commercialize technology, Teece (2010) draws on the *profiting from innovation framework* as presented in Teece (2006). This framework holds that firms and entrepreneurs may design a business model based on different commercialization strategies which reside on the continuum of highly integrated business models on the one end and pure licensing approaches on the other.

Most importantly, however, Teece (2010) launched a discussion concerning the aspect of dynamics in business models. Scholars have contributed to this vein mainly by drawing on the dynamic capability framework developed by Teece and Pisano (1994) and Teece, Pisano, & Shuen (1997), which provides a process perspective on the development, reconfiguration, and release of internal as well as external resources (Eisenhardt & Martin, 2000). In contrast to an RBV, a dynamic capability framework sheds light on the question of how managers adapt and develop business models in the wake of fast changing external environments (Cavalcante, Kesting, & Ulhoi, 2011). Leih, Linden, and Teece (2015) highlight that 'the successful intertemporal management of value creation, delivery, and capture is a key dynamic capability' for BMI, and that 'certain aspects of organizational design,

such as shallow hierarchies and pro-entrepreneurial incentive design, are important supports for dynamic capabilities' (p. 37). In another vein, Achtenhagen, Melin, and Naldi (2013) present three central capabilities, 'an orientation towards experimenting with and exploiting new business opportunities, a balanced use of resources, as well as achieving coherence between leadership, culture, and employee commitment, together shaping key strategizing actions' (p. 431). A deeper understanding on the process perspective on business models is only just emerging, but presents a promising pathway for future research.

Ultimately, both authors of the research group reach to the conclusion that a business model is not a strategy, since a good deal of managers confuse the two terms. Business models should create value for the customer and, thus, the model is constructed around delivering that value. Chesbrough and Rosenbloom (2002) present two business model goals, which are subtly different from those of a strategy. First, a business model should directly indicate how a business creates value. Second, whereas a strategy requires careful, analytic calculation and choice, a business model consciously assumes that knowledge is cognitively limited and biased by the earlier success of the firm. The cognitive implication derived from the defining characteristics is that a business model links the technical physical domain to the economic domain. Unlike the physical domain, which is typically well defined with hard facts and observations, the economic domain is filled with vague and unclear variables, facts, and questions. Hence, there is a cost of structuring a business model, which is the filtering out of certain possibilities due to cognitive limitation and bias imposed by the business model itself. Teece (2010), in a similar vein, highlights that the business model is a more generic concept than a strategy as selecting a strategy 'is a more granular exercise than designing a business model' (p. 180). Thus, a through strategic analysis builds the ground for every sustainable business model design.

The research group is interested in building the bridge to technology management. Chesbrough focuses on the aspects of spin-off strategies and open business models, and thus explores organizational matters. Teece is interested in exploring the role of dynamic capabilities for BMI. Both highlight the demarcation of the concept of business models from strategic management research.[4]

2.5 Strategic Choice School (Harvard Business School)

A business model is a result of strategic choices

Enriching the ongoing debate on how business model and strategy are interlinked, Casadesus-Masanell and Ricart (2010b) attempt to clarify the differentiation as well as the gap between strategy and tactics. The authors underline not only the lack of a clear distinction but also the fact that most managers confuse these three concepts: strategy, business model, and tactic, and that academics have not been doing enough to clarify the gaps. The authors explain that business models are results of strategic decisions. Once a business model is employed, a firm makes tactical decisions within the well-defined rules of play constrained by the chosen business model. In this regard, strategic business model choices are the most complex task for firms. First, the rules of the game are usually not well defined. Second, the mapping of potential strategic outcomes dependent on different choice scenarios is extremely complicated, as each modification of the strategy requires a full re-assessment of the tactics. Third, it is impossible to predict the competing firms' reactions on a strategic level.

Apart from their conceptual research on business models, Casadesus-Masanell and Ricart (2010a) expose the relationship between competitiveness and the concept of business models based on case studies. The

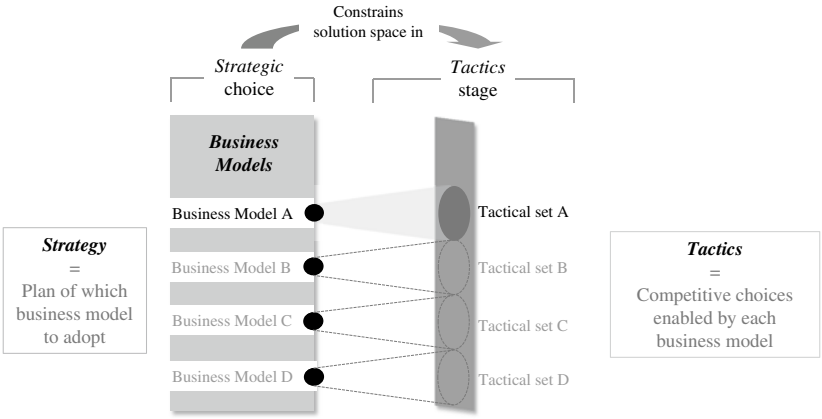


Fig. 2.5 Perspective on business models as presented by the strategic choice school (Adapted from Casadesus-Masanell and Ricart (2010a))

authors argue that if managers aim to gain a sustainable competitive advantage in an efficient way, they should shift their focus to their business model, since it sits at the very core of competitiveness. In addition, the authors point out the need for firms to innovate their business models at every perceptible and noticeable change in their market environment. Thus, they expose the interaction between business models and changes in the environment (Fig. 2.5).

The Strategic choice school also finds that business models may serve as blueprints and are subjects for imitation. Casadesus-Masanell and Zhu (2013) empirically explore this topic in a formal analysis of strategic interactions between innovative entrants and incumbents building on profit functions as unit of analysis. In their study, which builds on elements of game theory, the incumbent 'may imitate the entrant's business model once revealed' (p. 464). This research yields interesting conclusions. First, given that it is possible for incumbents to imitate and copy the entrant's novel business model, the entrants should either (1) 'strategically choose (whether) to reveal their innovation by competing through the new business model' or (2) conceal their innovation by adopting the traditional business model. From the incumbent's perspective, depending on the environment, the BMI brought by the new entrant may be so valuable and substantial 'that an incumbent may prefer to compete in a duopoly rather than to remain a monopoly' (p. 464).

The research group around Casadesus-Masanell pursues the connection between business models and existent streams of theory in strategic management. The theoretical triangle of competitive imitation literature, competitive advantages, and game theory builds the framework for several papers.[5]

2.6 Recombination School (University of St. Gallen)

A business model is a recombination of patterns for answering the who–what–how–why questions of a business

Gassmann, Frankenberger, and Csik (2014) suggest a framework that structures a business model in four dimensions, namely the customer, the value proposition, the value chain dimension, and the revenue model.

They define the cornerstones of business models as answers to the following four questions.

1. *Who*? Every business model serves a certain customer group (Hamel, 2000). Thus, it should answer the question 'Who is the customer?' (Magretta, 2002).
2. *What*? The second dimension describes what is offered to the customer, or put differently, what the customer values. This notion is commonly referred to as the value proposition (Teece, 2010).
3. *How*? To build and distribute the value proposition, a firm has to master several processes and activities. These processes and activities go along with the involved resources (Hedman & Kalling, 2003) and capabilities (Morris et al., 2005).
4. *Why*? Why does the business model generate profit or, more generally, value? This dimension explains why the business model is financially viable, and therefore relates to the revenue model. In essence, it unifies aspects, such as cost structure and revenue mechanisms.

The core philosophy of the research team builds on an extensive study of the vast majority of all successfully developed business models over the past 50 years plus a number of pioneering ones from the past 150 years. The central finding is that 90 per cent of all business models are built on the basis of 55 repetitive patterns. This research approach to BMI is in line with other current endeavours which try to develop archetypes, categorizations, or morphologies in BMI. In a more theoretical manner, this view on business models builds on such scholars as Baden-Fuller and Morgan (2010) and Doganova and Eyquem-Renault (2009). These studies highlight the fact that business models may act as a blueprint or template and regard BMI activities as a form of imitation. Thus, the central innovation mechanism is the fusion of and building on existing knowledge to drive new business models. In addition, the use of analogies for creative imitation has been acknowledged as a source of innovation in traditional innovation management literature (Hargadon, 2002). By having their empirical findings embedded in a methodology, those business model patterns can be applied to design new business models in practice. In addition, the methodology was inspired by the 'theory of inventive problem solving' stemming from the discipline of mechanical engineering. Hence, their approach may be best located in competitive imitation and innovation process literature streams.

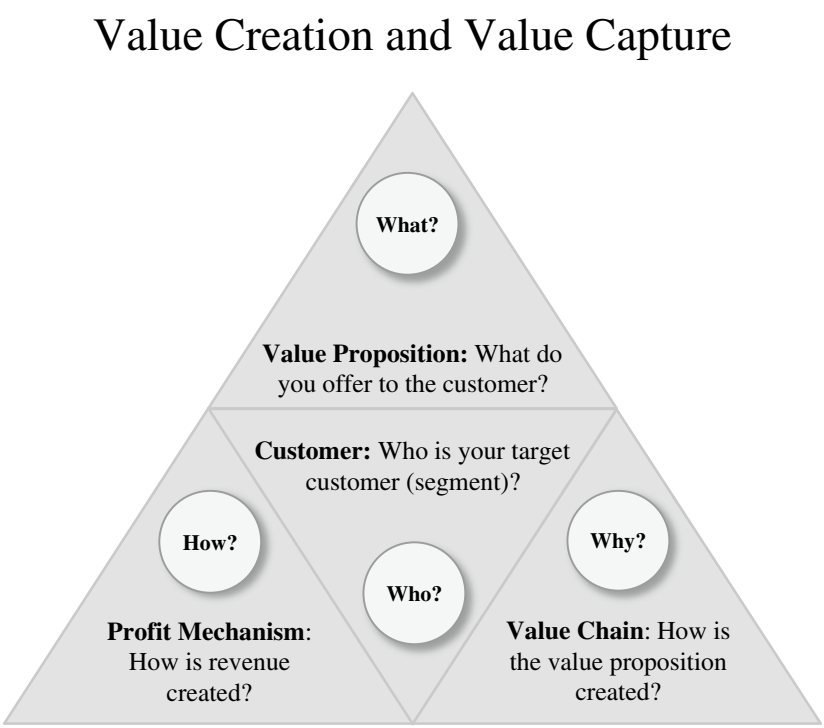


Fig. 2.6 The 'Magic Triangle' of the recombination school

Another central point of this research group is open business models. Frankenberger, Weiblen, and Gassmann (2013) are among the first to apply a network theory perspective on the concept of open business models. A central result of this research is the derivation of three archetypes of network configurations for solution providers that use open business models. Depending on the level of customer centricity, a company aims for different levels of openness, and distinct network configurations are suggested accordingly (Fig. 2.6).

Frankenberger, Weiblen, and Gassmann (2014) further explore their research on open business models by analysing the antecedents of this specific type of business model. In a multi-case analysis of eight incumbent companies that apply open business models, five types of antecedents are found, namely business model inconsistency, the need to create and capture value, previous experience with collaboration, open business

model patterns, and industry convergence. The same study suggests differentiation of open business models in four types of openness (structured by the two dimensions of *dependence of openness* and *locus of openness*).

Gassmann's research group pioneers in translating an engineering science theory—the theory of inventive problem solving, in mechanical engineering more commonly known as TRIZ—to management science. The approach can be rooted in creativity research as well as competitive imitation. The group also contributes to academic research by analysing open business models and applying network theory.[6]

2.7 Duality School (London Business School)

A business model does coexist with competing business models and requires ambidextrous thinking

The contribution of this research group to the area of business models is threefold. First, the term BMI is theoretically demarcated from radical product and technological innovations. Second, it tackles the topic of managing dual business. Third, the business model is interlinked with the topic of ambidexterity, which is the capability to balance two types of learning behaviour–*exploitation* and *exploration*. Apart from the theoretical contribution and conceptual far-sightedness, this research also includes BMI for emerging markets.

Markides (2006) enquires how BMI is a distinct phenomenon compared to technological innovations and new-to-the-world product innovations. He proposes treating them individually, as they produce different kinds of markets and have different managerial implications. For instance, new business models 'are not necessarily superior to the ones established companies employ, a fact implying that it is not necessarily an optimal strategy for an established company to abandon its existing business model in favour of something new or to grow the new model alongside its existing business model' (p. 21). BMIs are characterized, for instance, by approaching new customer groups or by significantly extending an existing customer base. BMIs redefine the core product or service and emphasize different attributes of the same. Thus, they are rather radical (Markides, 2006).

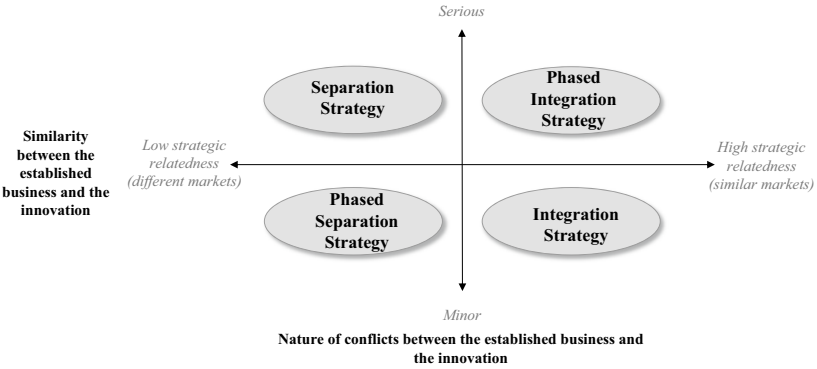


Fig. 2.7 Different strategies for managing dual business models (Adapted from Markides and Charitou (2004, p. 24))

According to the Duality school, implementing a novel business model requires explorative activities as BMIs are somehow new in nature and long for new organizational processes, structures, and capabilities. This stays in stark contrast to an operating business model of a company, which is most often directed at exploitation. A conflict emerges which is characterized by whether there is a conflict with the established business and whether there is a similarity with the established business as depicted in Fig. 2.7. Based on these two dimensions, the Duality school suggests several organizational mechanisms (Markides & Charitou, 2004).

Research on managing dual business models is somewhat congruent and mutually enriching, especially if one considers the publications that interlink BMI with ambidexterity. Dual business models refer to competing with more than one, and potentially cannibalizing, business models in a single market. There is a considerable body of research that argues in favour of structural separation when it comes to such a form of BMI. This implies a complete separation of activities. Markides (2013), however, argues that this approach might fall too short and a more differentiated picture has to be drawn. The 2013 paper calls for refining this view (Markides, 2013). For instance, it encourages exploring how other modes of ambidexterity, namely contextual and temporal ambidexterity, might be beneficial for the implementation and management of BMI.

The Duality school takes the organizational dimension of BMI into consideration. More specifically, it focuses on managing parallel business models by interlinking BMI with literature on organizational ambidexterity. An additional aspect central to their research is the topic of resource constraint innovation and business models for emerging markets. Although the research is thoroughly anchored in theory, it has strong practical implications.[7]

2.8 Case Study: Nespresso from the Perspective of the Seven Schools of Thought

To provide a practical explanation of the presented business model literature, we show how the seven schools of thought refer to a case example. We opted for the Nespresso case since a well-known example eases the understanding of a complex theoretical matter. Moreover, we have selected the case of Nespresso because it has created a major revolution in the coffee business.

One of the most admired BMIs can be traced back to this case. Nespresso successfully managed to transform low-priced commodity coffee into a premium good. At the same time, by combining coffee manufacturing and machine production, the brand is now able to control its entire ecosystem from coffee bean sourcing to producing and selling packaged coffee.

When Nestlé launched Nespresso in 1986, it was confronted with fierce competition in the coffee market due to dominating coffee distributers as well as machine manufacturers. The product has been first developed for a niche market: coffee in offices where the price elasticity of demand is rather low, convenience seemed to be more important than price. Within the past few years, the brand has experienced substantial growth, and Nespresso currently represents the fastest growing business unit of its parent company. The main profit formula lies in the application of a razor and blade model. Nespresso profits not from selling its coffee machines but from the sales of the separate capsules, which have an estimated gross margin of 85 per cent (Conley, Bican, & Ernst, 2013). Nespresso has further managed to accelerate growth by creating emotional value articulation through marketing initiatives such as the Nespresso Club, the fancy design of Nespresso boutiques, and advertisements starring Hollywood celebrity George Clooney.

An Activity system perspective: Starting with the activity system perspective, we elaborate first on the activity system's content, structure, and governance and second on the NICE framework of Nespresso. As noted, **content** refers to the selection of activities that are performed to deliver the value proposition. In the case of Nespresso, these are the constant research and development of the integrated capsule system, the production of the machines and ingredients (including the capsules), the convenient product, service and consumable delivery to the customer, the assurance of unchanging quality and giving the customer an experience of luxurious lifestyle. With regard to the **structure** of Nespresso's activity system, the focus lies in how these activities are delivered and interlinked. This dimension thus primarily refers to the organization and architecture of the value chain activities. Nespresso's activity system structure is coined by a high integration of know-how and activities in the machine and ingredient (coffee) development, the careful and lean coffee supply management, and avoiding the use of intermediaries. Ultimately, the activity system's **governance** defines who performs which activities. For instance, Nespresso distributes the products itself by means of a direct selling model using boutique stores and an own E-commerce platform. Nespresso also produces the capsules and the ingredients itself. Conversely, Nespresso collaborates with *DeLonghi*, *Krupp,* or *Koenig* in the production of machines. In analysing the design themes, which depict the activity system's dominant value creation drivers, Nespresso mainly focuses on **Novelty** and **Lock-In**. The activity system has created an entirely new customer experience by decoupling the sales activities from regular retailing (novelty). In terms of Lock-in, Nespresso has achieved a high level of protection for the interface by the use of patents. The coffee filter for instance has been integrated in the capsule, which aims to impede imitation (Lock-in).

Nespresso's value drivers are located in the two design themes 'Lock-In' (integrated capsule system) and 'Novelty' (Nespresso was one of the first to disentangle sales activities from classic retailing).

A Process school perspective: A primary focus of the process school is to analyse the dynamic evolution and adaptation of a business model in the wake of external or internal changes. According to the process school,

a continual alignment between resources and competencies, the value proposition as well as changes in the internal and external environment has to be achieved. Analysing Nespresso, the business model underwent several stages since its launch in 1986. Nespresso was the first company to pioneer the portioned, encapsulated coffee market. At the beginning they aimed towards a product for professional customers in the offices not for the private households. Activities have also been focused on the core technology, quality, and functional excellence of the product. Later the capability of introducing and managing an innovative revenue model became central and ultimately the brand management became increasingly important. From 1989 on, capsules were delivered to households by mail. In detecting the opportunity of online channels, Nespresso was then the first market player to identify the potential of E-commerce and offered an online-shop in 1996. In the beginning, Nespresso primarily focused on the convenience aspect. With increasing competition in the premium coffee market and capsule technology, the brand management and emotionalization of the value proposition emerged as a central paradigm. However, the patenting activity keeps being an ongoing core capability.

Nespresso succeeds with the capability of continuously adapting the business model to novel opportunities such as the need for convenience, the emergence of online sales or the desire for luxurious lifestyle.

A Cognitive school perspective: According to the cognitive school, BMI combines the copying of scaling models and the adaptation of business role models by managers. For instance, the Cognitive school would differentiate between product- and service-oriented or between network-centric and dyadic models (as noted previously, Nespresso offers a servitized product, produced in a conventional value chain network). Apart from such categorizations, the cognitive school analyses the notion of a business model on an individual level. Therefore, the cognitive school investigates questions of how managers at Nespresso came to innovate their business model. This, for instance, raises the question of how the pathway of entrepreneurial activity took place, asking 'How did managers at Nestlé detect and seize the opportunity to innovate a business model in the absence of any exogenous change?' A key argument of the cognitive school is that business model innovators must overcome an inertia of extant business model schemas.

In doing so, innovators adapt cognitive mechanisms that recombine extant solutions and models in completely new ways by the process of analogical reasoning or conceptual recombination (Martins et al., 2015).

Cognitive processes in the minds of Nespresso's entrepreneurs such as 'analogical reasoning' or 'conceptual recombination' triggered the BMI.

A Technology-driven school perspective: The core product, portioned and encapsulated coffee, was developed by Nestlé in 1986. For a long time, the potential of commercializing that technology remained unexplored. In the words of the Technology-driven school, the epicentre of innovative activities was the technology but only a viable business model drove fulminant success. Indeed, sales significantly picked up as Nespresso directed its attention towards the innovative Razor and Blade business model. From a Technology school's perspective, the capsula was the new technological product which needs to be commercialized in a holistic way. According to this school the business model can be described based on six dimensions: Nespresso offers a **value proposition** of convenient usage and low upfront investment for the customer (a conventional coffee machine usually costs much more than the Nespresso machine). Moreover, Nespresso initially focused on a clear customer group–hip, wealthy, and urban professionals. This led to the creation of an entirely new **market segment** back then–the premium coffee sector. As noted in the activity system perspective, the value chain activities are coined by a high degree of integration of ingredient and hardware in terms of R&D, a direct selling model, and strategic partnerships in production. In terms of the **cost structure/profit potential,** Nespresso has leveraged the integrated technological interface of machine and capsule in a revenue model that lowered the investment costs for a coffee machine significantly. Conversely, the capsules were sold at high prices. The value network of Nespresso is coined by strategic partnerships with machine producers or certified coffee suppliers. Most importantly, Nespresso aims at a position in isolation of competitors or other complementors. Ultimately, the **competitive strategy** of Nespresso is to maintain the monopolistic position in the premium coffee sector, for instance, by increasingly emotionalizing the brand and the value proposition.

The Nespresso capsule technology has been left unused for a long time. Success kicked in as an innovative business model was executed.

A Strategic choice school perspective: The Strategic choice school interlinks business models with the strategic stage (choice of a business model the firm will compete with) and the tactical stage (residual choices a firm can make on the basis of the chosen business model). A business model is thus composed of two elements-concrete choices by the management on the business model and the respective constraints and consequences of this choice. Moreover, the Strategic choice school analyses if and how incumbents change their business model once new entrants arise or competitors change their business model. Some distinctive features and choices of Nespresso's business model are to eliminate intermediaries, sell consumables at high margins, sell machines at low margins, integrate the interface between capsule and machine, and pursue a high-pricing strategy. Resulting consequences of this business model choice is Nespsresso's dependency on revenues based on consumables, the need to maintain a monopolistic position and to attract consumers with relatively high incomes. Competitors soon entered the premium coffee market with similar capsule systems, such as *Cafissimo*, or copied the Nespresso capsules, such as *Denner*. Today there are 85 competitors active - only in the European market. Such competitive imitations are a logical implication according to the Strategic choice school and subsequent actions of the competing firms may be explained by game-theoretical considerations. However, Nespresso did not change its business model to counteract competitors and new entrants. The company rather built on tactical choices to strengthen the extant business model. This included protecting the interface of capsule with machine or the various measures to emotionalize the value proposition in order to attract young urban professionals.

Nespresso opted for a business model based on selling expensive consumables and cheap machines. Consequently, Nespresso necessarily has to maintain a monopolistic position. Nespresso accomplishes this based on a stringent IP management and by emotionalizing the value proposition for instance. These are tactical choices which do not change the overall Nespresso business model.

A Recombination school perspective: According to the Recombination school, Nespresso's business model can be described based on four dimensions. This framework explicitly places the customer in the centre of the business model. The so-called **Who** dimension depicts the customer with his pains, needs, and gains. Among these are the high investment costs of an automatic coffee machine such as *Jura*. Nespresso has also come to see that a critical pain-point for customer loyalty was the break-down of a machine. In order to increase robustness and lengthen the lifespan of a machine, Nespresso fitted the gasket into the capsules for instance. The **What** dimension depicts how this technical solution has been integrated into a convenient value proposition. Subsequently, the **How** dimension shows how Nespresso creates and delivers the value proposition to the customer. This dimension thus describes how Nespresso integrates activities of machine and ingredient development, collaborates with strategic supply chain partners in the production of the machines, and so on. Ultimately, the **Why** dimension answers the question of why the business model is profitable and directs the focus on the Razor and blade model, one of the generic business model patterns Nespresso adopts. First, Nespresso adopted the **Razor and blade** model with the core logic being the sales of the basic product (the machine) at low margins and the consumables (the capsules) at high prices. Second, Nespresso applied a **Lock-in** model, whereby companies capture customers in one product segment, increasing switching costs to other systems. Third, the company uses a **Direct selling** pattern, where intermediaries and retailers are discarded. Ultimately, Nespresso adopts the **Customer experience** pattern, by emotionalizing the entire value proposition. In the case of Nespresso this has been achieved by hiring George Clooney as brand ambassador or building boutique stores in fancy shopping promenades (see Gassmann et al. (2014) for an additional case analysis). All business model patterns have been already available from past examples in other industries. For instance, the Razor and blade such as Lock-in pattern have already been adopted by *Gilette* in 1904. The Direct selling pattern has been applied by *Tupperware* for kitchen and household products in the late 1940s and 1950s.

The Nespresso business model is a recombination of the Razor and blade, Lock-in, Direct selling, and Customer experience pattern.

A Duality school perspective: In analysing the Nespresso case, the duality school puts a specific focus on how Nestlé has managed to adopt a second, cannibalizing business model in parallel to the extant Nescafe business model. Nescafe has been the primary business model for selling coffee to the mass market. The instant coffee has been sold based on a retailing structure. Prices were defined at a cost-plus method. As noted in the previous sections, the Nespresso business model differs in nearly all dimensions from conventional business models in the coffee industry. Markides and Charitou (2004) have analysed the implementation of the additional business model and came to see that 'Nespresso coffee was in effect cannibalizing the sales of Nescafe, and the values and attitudes of the Nespresso organization were the exact opposite of those in the traditional Nestle organization' (p. 25). Consequently, Nestlé succeeded in completely separating the novel business model in a new organization that was also geographically separated. According to the Duality school, this seems reasonable as there has been a 'serious conflict between the established business and the business model innovation', and there has been a great 'similarity between the established business and the innovation' (p. 24). It is recalled that great autonomy and freedom were two of the success factors for the implementation of the novel business model (see Markides and Charitou (2004) for an additional case analysis).

Nestlé managed conflicting business models (Nescafe vs. Nespresso), by implementing the new business model in a separated organization.

2.9 Preliminary Discussion

After 25 years of research, the business model literature might be a young field compared to strategic management but a lot of rigorous scholarly work is done. We have presented the seven most comprehensive schools of thought spearheading this field. These represent prominent streams towards a thorough theoretical perspective on business models. Evidently, not all schools are equally acknowledged in research yet. We may, for instance, assert that the activity system perspective is one of the frequently used frameworks in academia. This is probably due to the publications in highly ranked journals and introduction of concepts and measures like novelty- versus efficiency-centred business models. Another much noticed school of thought is the cognitive school, which does a thorough job in

demarcating the business model concept in relation to the field of strategic management. However, more important than a discussion about the impact of a school from today's perspective is the assertion that all schools have great potential to further spearhead the field of business models.

Looking at these schools, we may notice some differences, overlaps, or even commonalities in some respects (see Table 2.2).

Starting with the commonalities among the schools, all seven focus on the central question as to how firms create and capture value. A key argument of business model scholars is that the concept of business models has a greater explanatory power compared to previously adopted concepts in strategic management research. For instance, the business model adopts a perspective on firms that is boundary-spanning and explains how the focal firm is embedded in and transacts with its surrounding ecosystem (Shafer, Smith, & Linder, 2005; Teece, 2010; Zott & Amit, 2008, 2009). By modelling the boundaries of the firm and the interface between the company and customers, business models extend the locus of attention compared to classic strategy research. In this vein, all schools of thought give impetus on the emerging concept of joint value creation. Continuing further this line of reasoning, all schools search for a demarcation from the field of strategic management or justification in the field of strategic management, albeit in different ways (see Table 2.1).

In targeting the anchoring of business models in academia, the majority of works presented by these schools still follow a rather conceptual or qualitative perspective, which marks a further commonality among the schools. This is, however, characteristic to the emergence of a research field and potential theory. A rigorous and direct focus on the performance link of a business model choice or novelty of a business model is only subject of analysis for the activity and the strategic choice school (Table 2.2).

One of the biggest issues in the current emergence of a shared notion on business models is its differing usage in various disciplines/research fields such as technology and innovation management, entrepreneurship, or strategic management. Those adopt the notion of a business model in tailored ways. Consequently, different levels of abstraction are presented (e.g. activity systems vs. narratives), and different research foci are adopted (e.g. dual business models of incumbents vs. business models of entrepreneurial firms). These differences have led to a broad range of viewpoints and interpretations, which clearly demarcates a school from the other. Also, some schools of thought adopt a rather static perspective such as the activity system schools, while others are inherently more dynamic in their theoretical underpinning (e.g. the process school).

Table 2.1 Relation of the business model to strategy research

	Demarcation from 'strategy'
Activity system school	The notion of business models as activity systems puts forward a new understanding of firm boundaries and broadens the scope of a 'focal firm', considering it as a network of activities, including external resources. The business model is thus a new unit of analysis in strategy research. The school has for instance explored novelty versus efficiency-centred business models with regard to the product/market strategy of a firm
Process school	The school provides a dynamic view on strategy, opposing the view that competitive advantages must be protected ('i.e. there should be no major changes in an operating BM' (p. 244) and avoiding the drawbacks of hypercompetition theory (Demil & Lecocq, 2010))
Cognitive school	The business model focuses on the interface between a firm and its customers. This specific focus has been mostly neglected in strategic management research. Moreover, the research on cognitive business model schemas differentiates the research from the classic strategy literature
Technology-driven school	The school argues that a business model 'formulates the competitive strategy by which the innovating firm will gain and hold advantage over rivals'. The business model differs from strategy in several ways. 'Firstly, the business model starts by creating value for the customer, and constructs the model around delivering that value (…) A second difference lies in the creation of value for the business, versus creation of value for the shareholder. (…) A final difference (…) lies in the assumptions made about the state of knowledge held by the firm, its customers and third parties.' (Chesbrough & Rosenbloom, 2002, p. 534ff)
Strategic choice school	'Strategy refers to the choice of business model through which the firm will compete'. The business model refers to the logic of the firm, the way it operates, and how it creates value for its stakeholders' (Casadesus-Masanell & Ricart, 2010a, b, p. 196)
Recombination school	Strategy refers to the choice of business model patterns from other industries which will be adapted to the own industry
Duality school	A business model is deeply linked with strategy; a clear demarcation is not drawn explicitly. Competing with dual business models implies pursuing two strategies simultaneously

Table 2.2 Comparison of schools of thought on business models

	Activity system school	*Process school*	*Cognitive school*	*Technology-driven school*	*Strategic choice school*	*Recombination school*	*Duality school*
Maxim	A business model is a set of interdependent activities spanning firm boundaries	A business model is a dynamic process of balancing revenue, costs, organization, and value	A business model is a 'model' or the 'logic' of how firms do business	A business model is a way to commercialize novel technology	A business model is a result of strategic choices	A business model is a recombination of patterns for answering the who–what–how–why questions of a business	A business model coexists with competing business models and requires ambidextrous thinking
Research focus	Configuration of the firm's architecture and its network of exchange partners. Mostly entrepreneurial firms	Adaptation of the business model and its constituting elements to its external environment	Individual and collective minds	Embeddedness of a novel technology into a viable business model	Business model configuration to achieve competitive advantage. Both incumbents and entrepreneurial firms	Business model patterns	Organizational design of dual business models, mostly incumbents
Level of abstraction	Activity systems	Firm-level choices and meta models	Mental models and narratives	Key components	Firm-level choices and meta models	Key components and archetypes	Firm-level choices and meta models

(*continued*)

Table 2.2 (continued)

	Activity system school	*Process school*	*Cognitive school*	*Technology-driven school*	*Strategic choice school*	*Recombination school*	*Duality school*
Dominant theoretical perspective	Complexity and system dynamics oriented theories, value networks, transaction cost economics, resource-based view, Schumpeterian innovation	Dynamic capabilities, resource-based view	Interpretative theories such as managerial cognition or strategic/cognitive groups and dominant logics	Disruption, Schumpeterian innovation, dynamic capabilities	Game theory, competitive imitation	Creativity theory, competitive imitation, network theory	Organizational ambidexterity
Dynamic perspective	Activities are resources in use; moreover, an activity system is a 'system that is made up of components, linkages between the components, and *dynamics*' (Afuah & Tucci, 2001, p. 4)	Entrepreneurial business model development and business model evolution	Analysis of the pathway of entrepreneurial behaviour	Business model design in the wake of technological disruption	Strategic business model choice (long-term) versus tactical business model adaptation (short-term)	Business model innovation processes	Coexistence of conflicting business models during implementation and over time

	Activity system school	*Process school*	*Cognitive school*	*Technology-driven school*	*Strategic choice school*	*Recombination school*	*Duality school*
Empirical base	Both conceptual and quantitative publications play a significant role in the research. Quantitative approaches for instance focused on analysing a range of 300 Internet-enabled business models. The research is mostly focused on entrepreneurial firms	The work is of a qualitative and conceptual nature. They build on the theoretical work of Lakatos (1971), as well as the Penrosian view of the firm (Penrose, 1960). For their study on business model evolution, they draw on the case of the English football club Arsenal FC	The research group typically follows a qualitative approach on business models using case studies, supplemented by strong conceptual papers on the topic	The most popular case study is certainly their pioneering study on technology-based Xerox spin-offs (Chesbrough & Rosenbloom, 2002)	Research is directed at quantitative, mathematical methods, as well as case studies. A big empirical base was built on a dataset of sponsor-based business models	A major focus is set on profound qualitative case studies and on an analysis of almost all successful business model innovations in the last 50 years. The research is focused on incumbents and entrepreneurial firms	The research group delivers valuable theoretical and conceptual contributions on business models. Further research is mainly based on case studies

This heterogeneity may, however, support the emergence of one eclectic theory on business models. The analysis reveals some fruitful overlaps where the schools may complement each other. For instance, the Process school explores the continuous internal and external adaptation such as dynamic development of the business model. In the sense of Teece (2010) and the Technology-driven school, this would require the capability of sensing, seizing, and transforming business opportunities into financially viable business models as presented by Teece, Pisano, & Shuen (1997). Moreover, the Recombination school explores generic business model patterns and is thus strongly interlinked with how the Cognitive school grasps a business model, namely as a recipe, blueprint, or template. For instance, the Cognitive school introduces the concepts of analogical reasoning and conceptual recombination to innovate a business model (Martins et al., 2015). These two concepts are very familiar with the Recombination school which presents the concept of similarity and confrontation principle (Gassmann et al., 2014). Innovating a business model by the use of the similarity principle means to extract core challenges of your competitive environment. Based on a systematic search and analysis for solutions in related industries, these may be transferred to the own industry logic (this refers to 'analogical reasoning' presented by the Cognitive school). In contrast, the confrontation principle takes an outside-in perspective where the business model is confronted with solutions that are cognitively distant and unrelated (this refers to 'conceptual recombination' presented by the Cognitive school). Also, the Strategic choice school is conceptually interlinked with the Recombination school, as it analyses how generic business (revenue) model patterns are being adapted by firms in order to achieve superior firm performance. The merging and combination of different schools of thought is thus a viable avenue for future research. For instance, the entire process of how a business model, which resides as a schema in an entrepreneur's head (Cognitive school), unfolds in a dynamic implementation process (Process school) and ultimately results in an activity system (Activity system school), has not been sufficiently explored. Combining various viewpoints might enrich the debate on business models and potentially lead to one eclectic picture.

To conclude with another commonality, all schools explicitly draw on renowned management theories, albeit very different theoretical foundations. For example, the Activity systems school adapts Schumpeterian innovation, value networks, transaction cost economics, or the RBV, and thus draws on a broad array of theories. The process school in contrast is hooked on one single dimension, the dynamic capability perspective.

Building on these insights, the 50 theories offered in the next chapter make several contributions. First, we present the different theories which have been adopted by the different schools of thought already. Second, we present additional theories to the ones adopted by the schools. In this regard, we show avenues to theoretically enrich existing schools or even trigger future schools. Third, the collection of theories gives researchers an idea on how far the business model provides significant explanatory power for a phenomenon at all. The concept of the business model has been overestimated or misused many times. Markides (2013), for instance, has shown that much of the work on business models tries to reinvent the wheel without that being required. Consequently, the business model perspective might not provide enough novelty. The author reveals that many questions on business models may be framed as a theoretical challenge. In this way, an extant theory may already provide answers to a phenomenon without having to adopt a business model perspective. Oftentimes, the business model is, in fact, only a way to reframe and relabel something that has already been investigated, which raises the question of the value added by a business model perspective. The 50 theories we present in the next section are one way to elaborate in this important matter.

Before presenting the 50 theories and their correlation to business model research, we conclude by aggregating the seven schools of thought. Earlier attempts to organize literature on business models have adopted several dimensions for that. Wirtz, Pistoia, Ulrich, and Göttel (2015) decomposed business model literature in a stream following a strategic, an organizational and a technology-oriented stance. Massa and Tucci (2014) have delved into the various conceptualizations of business models, and argue that 'these could be structured into several levels of decomposition with varying depth and complexity depending on the degree to which they abstract from the reality they aim to describe' (p. 431). In another vein, Martins, Rindova, and Greenbaum (2015) have recently suggested a subdivision of the current business model research into rational, cognitive, and evolutionary streams. In the rational stream, business models are regarded as 'purposefully designed systems that reflect rational managerial choices and their operating implications' (p. 101). In the evolutionary view, it is argued that changes in business models are triggered by external uncertainty. By engaging in experimentation, managers ultimately find a system of activities to compete effectively. In the cognitive view, it is argued that 'business models reflect managerial mental models, or schemas' (p. 102). Ultimately, Baden-Fuller and colleagues differentiate between a realist view and a conceptual-principled view.

Building on these categorizations, we derive two relevant dimensions for structuring the seven schools as characterized in Fig. 2.8 in a comprehensive overview. The first dimension being the realist versus the cognitive view and the second dimension being the degree of abstraction, adapted from Massa and Tucci (2014):

The degree of abstraction defines whether a business model captures the firm by means of activities, a combination of generic patterns (archetypes), a structural template (key components), and so on. On the lower levels, a business model can be described as a system of interdependent activities or as a system of interdependent choices and their consequences as done by the Activity system school or the Strategic choice school. A higher level conceptualization of a business model can be achieved by adopting key components. This goes along with the widely known business model canvas of Alex Osterwalder, which structures a business model into nine building blocks, namely value proposition, key resources, activities, and partners on the upstream side, customer relationships, channels, and segments on the downstream side,

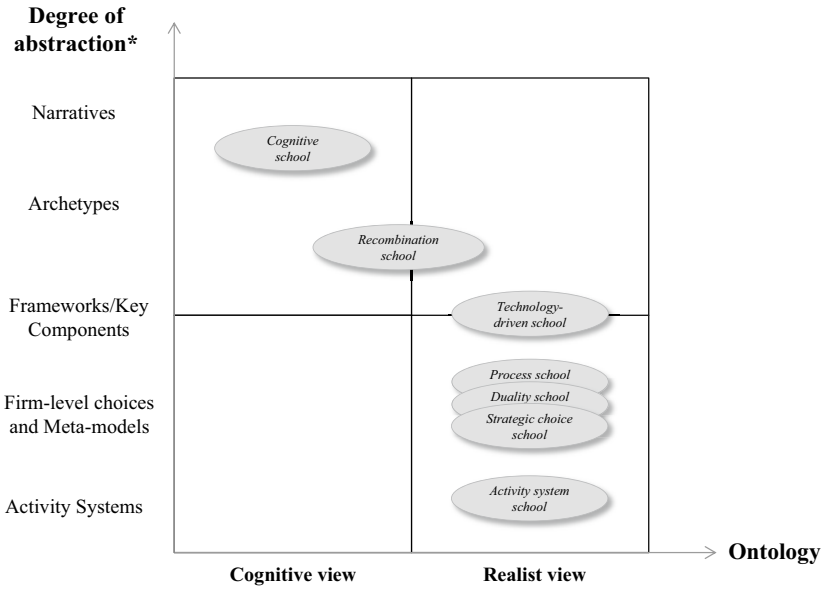


Fig. 2.8 Classification of the seven schools of thought (qualitative)

and ultimately, the cost structure and revenue streams (Osterwalder et al., 2010). Many schools of thought integrate a similar perspective such as the Technology-driven school or the Recombination school. Ultimately, a business model can be grasped as a narrative or a mental model, which reveals a very high level of abstraction, a concept adopted by the Cognitive school.

The second dimension refers to the ontological stance of a business model. An often-shared notion is to differentiate between a realist and a cognitive view. The Activity system school, for instance, adopts a realistic view by depicting and describing individual activities and putting them into a broader business context. Business models are seen as real things that can be formally modelled. In a different attempt, business models can be grasped more informally as mental models or narratives and thus a cognitive phenomenon. A concept adopted by the Cognitive school. Consequently, the business model resides in the head entrepreneurs or managers and guides their actions/entrepreneurial activities/decisions. The higher the degree of abstraction, the more a business model is grasped as a cognitive construct.

As noted before, these seven schools reveal overlaps and mutual influences which points to fruitful pathways of future research.

2.10 Role of Theories for Explaining a Phenomenon

Why do we need theories to embed the phenomenon of business models? Business models and the process of BMI are phenomena. Research examines logical and root cause relationships in order to understand an empirical phenomenon, its patterns, and mechanisms, as well as its success factors. Building on this, the business model as a conceptually distinct construct may provide theories with new explanatory power and reach. In this vein, managers can be given tools to lead and manage better.

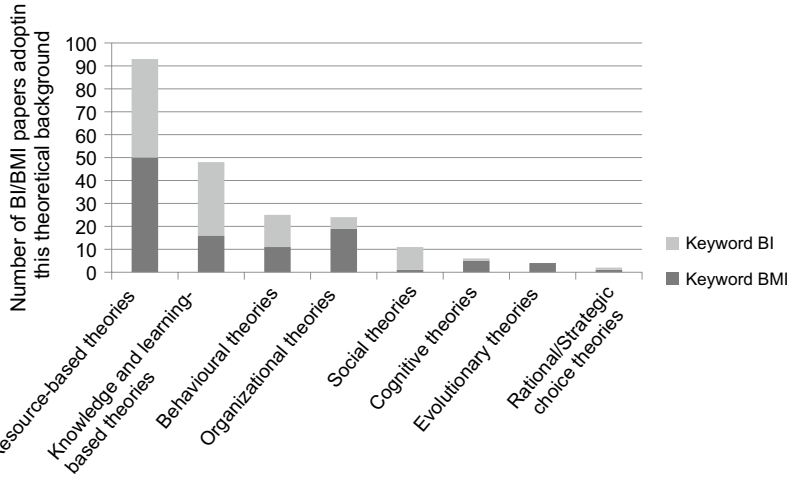
Generally, a theory is nothing more than a tool to explain an empirical phenomenon or conceptual statement. The value of a theory increases as the more explanatory power the theory has for the observed phenomenon. What are requirements for developing a new theory on business models? A theoretical contribution in the field of management has to be explicit, consistent, and rich. It should be possible to empirically test the theory and falsify it (Popper, 1982). According to Rynes et al. (2005), a theoretical contribution can inductively construct a new theory, inductively broaden an existing theory, apply a theory in a specific context, initially test a theory, falsify widespread assumptions, or conduct meta-analysis with theoretical implications.

An ideal theory contributes to an existing debate or opens up a new one. In the area of business modelling, a theoretical contribution has to match an empirical phenomenon, for example, the following. What are the antecedents of business models? What are the constitutional elements of a business model? How are business models used in different industries and contexts?

Most of the previous work on business models has tended to build on existing, grand theories, because so-called mainstream science (Kuhn, 1970) is constructed further based on past scientific achievements only. In an ideal traditional world, problems would be solved by universal agreement on the very foundations on which science is based. However, BMI is precisely a radical break from existing dominant logic, and hence, we have decided to approach the research in an analogous way by challenging the conventional manner of research.

The use of different theories is highly encouraged. To support this central argument, Fig. 2.9 roughly approximates which theoretical perspectives are most popular in business innovation and BMI literature. It shows that resource-based theories and knowledge/learning-based theories still form a central foundation in the area.

There are numerous methods for drifting from existing theories (Kuhn, 1970). Empirical insights, experiments, new theories, computation, simulation, as well as data mining support the renewal of existing theories. We want to encourage a broader search for theories explaining business models and BMI in terms of a paradigm shift, in which the existing paradigm of business models and its process of innovation are replaced by a new incompatible paradigm. The challenge lies in the incommensurability of contexts and theoretical contributions. However, this is simultaneously the positive side of the scientific renewal process: we can discover new perspectives and thereby might find new patterns and causal relationships. In this renewal process, business model researchers must be alert to various challenges. Zott and Amit (2013) reflect on five; one of them is the occurring overlap of the idea of business models with other concepts. The authors point out that to avoid confusion, it is essential to carefully distinguish the business model from other existing concepts in literature. Another issue is the critique that the concept lacks independence from other levels of analysis. Zott and Amit (2013) view this circumstance as an opportunity rather than a problem, as it 'points to the need to conduct multilevel research and to integrate theoretical perspectives' (p. 405). Furthermore, business models are sometimes perceived as lacking uniqueness at the level of analysis, and thus, it is crucial to distinctively define the business model to demarcate it from other levels of analysis. This raises the



A thorough theoretically anchored study generally cites the core theoretical papers of a theory they are building on (e.g. in the case of the attention-based view, Ocasio (1997)). For each theory, we counted the number of 'theory-citing' papers containing the keywords 'business innovation', and 'business model innovation'. The classification of a specific theory to the respective category is listed in the conclusion (e.g. organizational ambidexterity is categorized in organization theories). The database used is Researchgate, specifically,'theory-citing papers' considered since 1950.

Fig. 2.9 Theoretical anchoring of studies dealing with business innovation (BI) and business model innovation (BMI) (Note: A thorough theoretically anchored study generally cites the core theoretical papers of a theory theyare building on (e.g. in the case of the attention-based view, Ocasio (1997)). For each theory, we counted the number of 'theory-citing' papers containing the keywords 'business innovation', and'business model innovation'. The classification of a specific theory to the respective category islisted in the conclusion (e.g. organizational ambidexterity is categorized in organization theories).The database used is Researchgate, specifically,'theory-citing papers' considered since 1950).

challenge of finding 'clean and clear definitions' (Zott & Amit, 2013) to prevent the concept from becoming vague and ambiguous. In addition, solid empirical support to increase the acceptance of the concept is missing. Beyond that, Zott and Amit (2013) plead for more conceptual work to further enhance theoretical development.

The following chapters present existing theories, whose use we want to encourage for the broad area of business modelling. We present a collection of grand theories, although it is far from complete. Nevertheless, it should help researchers consider business models and BMI from different angles. We opt to select a few of the most renowned theories in order to shed

more light on the principles and patterns of the business model black box (Chap. 3). We also introduce 30 niche theories in management science (Chap. 4) and suggest applying them to understand what lies behind business models and BMI. By doing so, we hope to enrich the debate on business models, since the field has not yet reached sufficient theoretical depth. We invite management scholars and researchers from various fields to further develop our initial rough suggestions provided herein.[8]

Notes

1. Main Literature: (Amit & Zott, 2001), (Zott & Amit, 2007, 2008, 2010, 2013), (Amit & Zott, 2015).
2. Main Literature: (Demil & Lecocq, 2010), (Lecocq, Demil, & Ventura, 2010), (Plé, Lecocq, & Angot, 2010).
3. Main literature: (Baden-Fuller & Morgan, 2010), (Baden-Fuller & Haefliger, 2013), (Baden-Fuller & Mangematin, 2013), (Baden-Fuller, 2013).
4. Main literature: (Chesbrough & Rosenbloom, 2002), (Chesbrough, 2006, 2007a, b, 2010), (Teece, 2010), (Leih, Linden, & Teece 2015).
5. Main literature: (Casadesus-Masanell & Ricart, 2010a, 2010b, 2011), (Casadesus-Masanell & Tarziján, 2012), (Casadesus-Masanell & Zhu, 2013).
6. Main literature: (Gassmann, Frankenberger & Csik, 2014), (Frankenberger, Weiblen, Csik & Gassmann, 2013), (Frankenberger, Weiblen, & Gassmann, 2014, 2013).
7. Main literature: (Markides, 1997), (Markides & Charitou, 2004), (Markides, 2006), (Anderson, Markides, & Kupp, 2010), (Markides, 2013), (Markides & Sosa, 2013).
8. Main literature on this section: (Kuhn, 1970), (Reynolds, 1971), (Popper, 1982), (Sutton & Staw, 1995), (Okasha, 2002), (Rynes et al., 2005), (Colquitt & Zapata-Phelan, 2007), (Kriek, Beaty, & Nkomo, 2009), (Jaccard & Jacoby, 2010), (Zott & Amit, 2013).

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