

# Modern Business Model Innovation Methodologies: A Systematic Literature Review (2015-2020)

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#### **Abstract**

This research aims to investigate modern academic methodologies in business model innovation published 2015-2020. For this analysis a systematic literature review is conducted. As a result 14 academic methodologies are acknowledged and compared according to their process models. Moreover, the research takes a special focus on organizational mindset in business model innovation and how it is reflected in modern methodologies.

The study reveals that all evaluated academic methodologies are different in accordance to their focus as well as their level of detail of their described process steps. Among other findings, the topic organizational mindset is mentioned in two out of the 14 academic studies as an important element for successfully implementing a business model innovation. This implicates that overcoming the organizational mindset of established companies as a main barrier in business model innovation is not systematically concerned in any of the selected modern studies.

In summary, the findings of this paper point out that the current academic business model innovation methodologies are not appropriate and supplementary exploration has to follow. Thus, two research gaps are acknowledged. First, the lack of level of detail concerning the process steps. Secondly, the lack of systematic integration of organizational mindset in the business model innovation steps.

**Keywords:** systematic literature review, strategy, business model, business innovation, organizational mindset



#### 1. Introduction

## 1.1 The Pitfalls of Evolving New Businesses in the VUCA-World

"The reason why it is so difficult for existing firms to capitalize on disruptive innovations is that their processes and their business model that make them good at the existing business, actually make them bad at competing for the disruption."

#### - Bower&Christensen (1995)

No matter the industry, one common phenomenon has been witnessed within the last years: start-up companies were able to disrupt existing markets in a way that forced incumbent companies to either leave the market or declare bankruptcy altogether (Rogers, 2016, p. 210). Netflix, for example, defeated the leading retail chain for movie rentals, Blockbuster, with its initial DVD-by-mail offering. Nowadays, Netflix aims at disrupting traditional television, not only with its streaming-service, which has now more than 120 million subscribers around the world, but by allowing consumers to customize content with interactive story telling soon (Rogers, 2016, p. 210). Another disruptive example, Airbnb, has initially started as a commission-based peer-to-peer platform, which connected low budget travelers with locals who offered couch surfing to afford their homes. These days, a considerable part of Airbnb's listing consists of spaces that are not meant to be shared, ranging from low budget to luxury accommodations. Not only does Airbnb, therefore, directly compete with traditional hotels in all price categories and, as it often presents the cheaper alternative, decreases their rates and revenues, but it has even surpassed the major hotel chains in market valuation (Oskam&Boswijk, 2016, pp. 22-24, 26, 28). Regarding these examples of disruption, inevitably provokes one fundamental question: how are initially small companies, such as Netflix and Airbnb, able to successfully challenge established, incumbent companies, despite having fewer resources (Christensen, Raynor&McDonald, 2015, pp. 44-53.)?

Their success is based on following a completely different approach than incumbent companies do. Well-managed incumbents consistently try to stay at the top of their industry by developing and commercializing new offerings in order to address their main customers' needs more effectively (Bower&Christensen, 1995, p. 44). New entrants that prove disruptive, on the other hand, focus on developing offerings, which deliver a substantially better value to a certain customer segment than incumbents' offerings do. Thereby, they often particularly focus on serving small or emerging markets, which are not deemed profitable enough by large, established companies (Rogers, 2016, p. 204). But, moreover, they recognize that an innovative product itself has no inherent value, if it is not commercialized through an appropriate business model (Chesbrough, 2007, p. 156). Christensen, Raynor&McDonald (2015, pp. 44-53) and Rogers (2016, p. 210) emphasize that disruption can only be achieved by focusing on getting the overall business model, not merely the product, just right.

## 1.2 The Challenge for Business Model Innovation for Incumbent Organizations

However, although established companies have already recognized the threat that innovative



start-ups pose and, thus, the importance of business model innovation, they hardly ever master to develop an adequate response by generating disruptive business models themselves (Amit&Zott, 2001, p. 3). The problem with established companies is not seen in recognizing the importance of investing in business model innovation, but rather on how to do it effectively (Tendayi, Toma&Gons, 2017, p. 23). Quite often, the established processes, incentives, organizational structures and behaviors, which enable the company to successfully perform within its industry, inhibit the generation of new, potentially disruptive business models (Bettis&Prahalad, 1995, p. 7). Scientific literature attributes this phenomenon to the concept of organizational mindset named as dominant logic, which is considered the most common and most hindering barrier in business model innovation for established companies (Csik, 2014, p. 37). Thus, it compels a company's strategic opportunities to a degree that the management typically fails to recognize, explore, seize and exploit disruptive opportunities (Wördenweber, Eggert&Schmitt, 2012, pp. 50-51, 60). This outlines that the self-reinforcing effect the dominant logic has on the firm's existing business model, significantly influences the business model innovation process, especially with regard to identifying potential levers for disruption and generating valuable ideas on how to exploit them (Csik, 2014, pp. 2-3; Hacklin&Wallnöfer, 2012, pp. 166, 178).

# 1.3 The Need of Covering Organizational Mindset in Business Model Innovation

However, this leads to the question how existing scientific literature acknowledges and counteracts the blinding effect of incumbent organizations. Therefore, the research goal is to evaluate to what extend modern business model innovation methodologies cover the need of integrating the overcoming of organizations mindset in their strategies. More precisely, the following questions shall be responded by a systematic literature review:

- What is the current status of research on modern business model innovation methodologies published 2015-2020?
- What are special characteristics of the business model innovation methodologies focusing on their process model?
- How is the overcoming of organizational mindset enclosed in their different process steps?

#### 2. Method

#### 2.1 Defining Business Model, Business Model Innovation and Organizational Mindset

This section deals with the theoretical foundation in form of definitions of business model and business model innovation as well as the present research on organizational mindset.

#### 2.1.1 Business Model

Since 1995, business models have gained increasing attention from academics and scientists. Reviewing current literature reveals that, while earlier research focused on the definition of business models, more recent studies shift towards the design and implementation of business



models (Stampfl, 2016, pp. 24-25). In the beginning, authors assumed that strategy and business model represent identical concepts in the field of strategy research. Nowadays, literature considers them as different, yet related concepts (Stampfl, 2016, pp. 30-31). Magretta

(2002, p. 9) considers a business model a system, which describes how different elements of the business fit together, without including competition as a critical dimension. Strategy on the other hand, explains what a company does different and, therefore, better than its competitors. Hence, strategy focuses on a company's competitive position, while the business model translates the strategy into concrete activities (Stampfl, 2016, pp. 30-31; Csik, 2014, p. 20; Magretta, 2002, pp. 3-4). Osterwalder&Pigneur (2010, p. 15) agree that the business model implements the strategy "through organizational structures, processes and systems".

Despite this common understanding, no universally valid definition, which science agrees upon, can be found (Shafer, Smith, & Linder, 2005, p. 199; Csik, 2014, p. 20; Chesbrough&Rosenbloom, n.d., p. 6). However, definitions generally focus on the elements needed to create and capture value. Magretta (2002, p. 2), for example, states that "a good business model answers Peter Drucker's age-old questions: Who is the customer? And what does the customer value? It also answers the fundamental questions every manager must ask: How do we make money in this business? What is the underlying economic logic that explains how we can deliver value to customers at an appropriate cost?". Mitchell&Coles (2003,16; 2004, p. 17) describe a business "'who', 'what', 'when', 'where', 'why', 'how', and 'how much' an organization uses to provide its goods and services and develop resources to continue its efforts." Osterwalder&Pigneur (2010, p. 14) agree that a business model combines several elements to organize, create, deliver and capture value.

Chesbrough&Rosenbloom (n.d., pp. 6-7) also define business models as the unique combination of elements companies create value with: "a business model is a description of how your company intends to create value in the marketplace. It includes that unique combination of products, services, image, and distribution that your company carries forward" but further include "the underlying organization of people, and the operational infrastructure that they use to accomplish their work". Amit&Zott (2001, p. 493) further add that the business model acts as "an important locus of innovation" and is "a crucial source of value creation for the firm and its suppliers, partners and customers" and, thus, emphasize the importance of business models in the context of innovation.

#### Most relevant literature definitions name

- The Value Proposition: What is offered to the customer?
- The Customer Segment: Who is the customer?
- The Value Chain: How is this value proposition created and distributed to the customer?



■ The Revenue Model: How does the business model generate revenue and why is it profitable?

As the main elements of a business model (Csik, 2014, pp. 22-25; Stampfl, 2016, p. 33). Reducing a business model to these four elements facilitates its practical applicability. Simultaneously, this presents a concept, which is complex enough to provide a holistic overview of the business model structure, as it covers all factors from inside and outside the company (Gassmann, Frankenberger&Csik, n.d., pp. 1-2).

For this paper, in accordance with the elaborated definitions, a business model translates the business strategy into concrete activities, structures and processes. A business model also creates, captures and delivers value to a certain customer segment. Therefore, it acts as a basis, lever and source for innovation. It thus consists of the following elements: value proposition, customer segment, value chain and revenue model.

#### 2.1.2 Business Model Innovation

For quite a long time, the most common types of innovation in academic literature and in managerial practice were product/service, performance, process, organizational, social or market innovations. In this context, the business model was adjusted to fit the technological or market opportunity and enable the company to eventually capture value from it (Chesbrough&Rosenbloom, n.d., p. 2; Casadesus-Masanell&Zhu, 2013, p. 464). More recently, however, it became obvious that traditional types of innovation alone are not sufficient enough to obtain competitive advantage. Consequently, business model innovation itself became increasingly important and thus accepted as a distinct object of innovation (Stampfl, 2016, p. 37). The purpose of business model innovation does not lie in launching technological innovations, but rather in shifting from product-centered value creation to one that focuses on the associated business operations (Csik, 2014, pp. 32-33).

Based on this increasing interest, scientists have generated various definitions in order to describe the essence of business model innovation. However, these attempts have not yet resulted in one generally accepted definition (Csik, 2014, p. 34). Building on the definition of business models, Casadesus-Masanell&Zhu (2013, p. 464) summarize: "at root, business model innovation refers to the search of new logics of the firm and new ways to create and capture value for its stakeholders, and focuses primarily on finding new ways to generate revenues and define value propositions for customers, suppliers and partners". While most authors agree on business model innovation as a process of recombining the elements of the business model, the classification regarding the significance of each element varies (Mitchell&Coles, 2004, p. 17; Osterwalder&Pigneur, 2010, p. 136; Schallmo, 2013, p. 23).

Moore (2006, p. 88) and Comes&Berniker (2008, p. 78) consider the value proposition to be the significant element that needs to be changed. Moore (2006, p. 88) additionally focuses on the value chain, while Comes&Berniker (2008, p. 78) mark the revenue model as a lever for business model innovation. Osterwalder&Pigneur (2010, p. 136) pick up all four elements by declaring that business model innovation is "[...] about creating new mechanisms to create



value and derive revenues [...] [and] [...] about challenging orthodoxies to design original models that meet unsatisfied, new, or hidden customer needs". They further suppose that reinventing one of the four epicenters (resource-driven, offer-driven, customer driven, finance-driven) is sufficient to impact the remaining elements and thus innovate the business model as a whole (Osterwalder&Pigneur, 2010, p. 138). While this methodology highlights the interdependency of the business model components (Hacklin&Wallnöfer, 2012, p. 171), this dissertation, however, holds the predominant view of academic literature, in which authors specify that at least two business model elements need to be reinvented to deliver value in a new way (Csik, 2014, p. 35; Schallmo, 2013a, p. 27; Lindgardt et al., 2009, p. 2).

Besides concentrating on the elements of business models, Lindgardt et al. (2009, p. 2) state that business model innovation "can provide a way to break out of intense competition, under which product or process innovations are easily imitated [...]" and thus underline its ability to achieve competitive advantage, while at the same time prevent imitation form competitors. Mitchell&Coles (2004, p. 17) also highlight its ability to achieve sustainable competitive advantage by stating that "a business model replacement improves performance [...] versus the competition [...] [and creates] sustained enhancements in company earnings, cash flow and revenues", while also picking up the element of providing "product or service offerings to customers [...] that were not previously available". To execute business model innovation, Osterwalder&Pigneur (2010, p. 136) advise not to observe competitors, since "business model innovation is not about copying or benchmarking". Referring customer-perspective to indicate the degree of novelty, Skarzynski&Gibson (2008, p. 211) point out that "business model innovation is about creating fundamentally new kinds of businesses, or about bringing more strategic variety into the business you are already in - the kind of variety that is highly valued by customers".

Regarding these findings, it becomes obvious that existing definitions of business model innovation contain different elements and characteristics of the business model and innovation definition (Schallmo, 2013, p. 28). Figure 1 illustrates this combination of relevant aspects of these definitions.

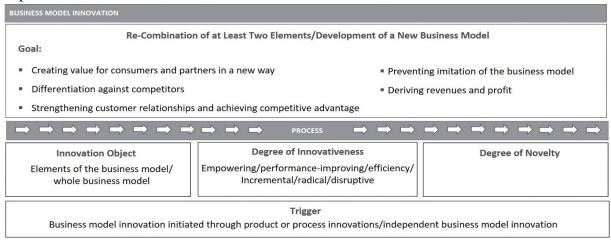


Figure 1. Elements of business model innovation (Schallmo, 2013, p. 29; Stampfl, 2016, p. 39)



In this study, business model innovation defines a process that completely renews a business model or recombines at least two elements of it. The main goal is to create and deliver a value proposition in a way that the client reflects it new and innovative to a certain degree. Therefore, it strengthens the customer relationship, fosters differentiation from competitors, prevents imitation and hereby ultimately generates growth, revenues and profit (Mitchel&Coles, 2003, p. 17; Schallmo, 2013, p. 29; Stampfl, 2016, p. 39). Figure 2 shows the four generally accepted steps of business model innovation (Schallmo, 2013, pp. 48-109).



Figure 2. The acknowledged four steps of business model innovation (Schallmo, 2013, p. 109)

## 2.1.3 Organizational Mindset

According Lang (2020, pp. 437) organizational mindset is defined by the academically acknowledged term dominant logic in detail. Dominant logic is the prevailing thinking and behavioral pattern of the majority of an organization based on experience (Lang, 2020, p. 437). The dominant logic contains key assumptions about the identity of an organization and is the basis of important decision-making (Bettis&Prahalad, 1986).

In reference to Lang (2020, p. 437) the termin includes the following dimensions and elements:

- Level of Application: Dominant logic exists in the entire organization (Bettis&Prahalad, 1986).
- Underlying Theory: Dominant logic has its origins in cognitive psychology (Bettis, 2000).
- Elements: Dominant logic combines behavioral and cognitive elements in an organizational context (Bettis, 2000).

The main goal of the dominant logic is to describe the prominent way how decision makers in companies think and act (Bettis, Wong&Blettner, 2011, p.351, Lang, 2020, p. 437).

## 2.1.4 The Role of the Dominant Logic within an Organization

According to Lang (2020, pp. 437-439), Franke&Zu Knyphausen-Aufsess (2014, p. 36), an organization's dominant logic is determined by internal and external factors. Internal factors state to the organization itself, its team members and elements. Franke&Zu Knyphausen-Aufsess (2014, p. 36) assign them to an individual person, a top-management team and organizational levels. External factors are determined by an organization's business, cultural and local environment. It develops further when the internal factors of an organization fit its environment in a way that enables a company to be successful. Figure 3 outlines the factors, as well as the function and reinforcement of dominant logic.



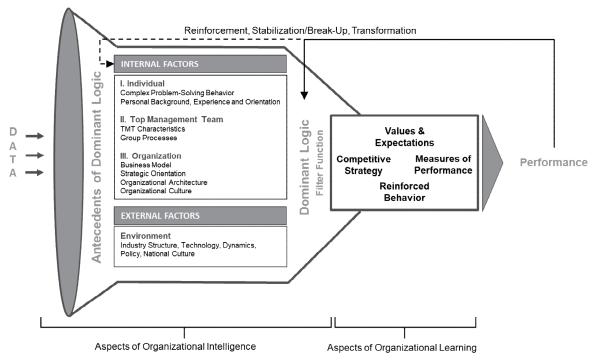


Figure 3. Factors and filter unction of dominant logic (Lang, 2020, p. 438, Franke&Zu Knyphausen-Aufsess, 2014, p. 35; Bettis&Prahalad, 1995, p. 7)

Figure 3 also outlines the filter function of dominant logic. In reference to the match between internal and external factors, dominant logic filters relevant data and directs an organization's attention to it (Lang, 2020, pp. 437-439). The filtered data is then incorporated into a company's strategy, values, expectations, performance measures and reinforced behavior of an organization (Lang, 2020, pp. 437-439, Bettis&Prahalad, 1995, p. 7). These determine an organization's performance (Lang, 2020, pp. 437-439). This finding shows that dominant logic presents an element of organizational intelligence, from which organizational learning can emerge. Organizational learning then again shapes the organizational intelligence through feedback loops. The dominant logic itself, as well as its internal factors are reinforced through success (Lang, 2020, pp. 437-439, Bettis&Prahalad, 1995, p. 7). In managerial practice, this reinforces the consistency of decision making by top-management (Lang, 2020, pp. 437-439, Csik, 2014, p. 38). According Lang (2020, pp. 437-439), factors like established structures, procedures, systems, routines and processes, embody the dominant logic and direct the attention of managers to issues that are deemed important by it. Furthermore, it provides information, values and decision rules, which standardize and simplify the decision-making process for managers and employees throughout the organization (Bettis, Wong&Blettner, 2011, pp. 372-373). Consequently in reference to Lang (2020, pp. 437-439) as long as there is no fundamental change in the organization's environment and thus no need to adapt the internal antecedents, dominant logic "can provide a highly effective and efficient means of managing the organization", reduce complexity, enhance consistency and thereby foster the overall stability of an organization (Bettis, Wong&Blettner, 2011, pp. 372-373).

According Lang (2020, pp. 437-439), "in the long term though, dominant logic consistently



increases the homogeneity of the organization and, at the same time, its inflexibility, inefficiency, inadaptability and inability to innovate". Consequently, when a significant change in the environment occurs, the dominant logic presents then a major impediment (Bettis, Wong&Blettner, 2011, p. 373; Csik, 2014, p. 38; Bouchikhi&Kimberly, 2003)...

As the environment changes, established values, thinking patterns and behaviors of organizations are no longer applicable (Bettis, Wong&Blettner, 2011, p. 373; Bettis &Prahalad, 2000, pp. 126-127, 130). In reference to Lang (2020, pp. 437-439) "this forces managers and employees to rethink and unlearn, which means adapting or eliminating elements of internal antecedents to make room for new thinking".

## 2.1.5 The Influence of Dominant Logic on Business Model Innovation

According to the previous section, how a company behaves regarding its internal and external factors is crucial for its success. Hence, it can be implicated that a firm's organizational mindset can significantly influence the business model innovation process (Lang, 2020, p. 439). In particular, these findings imply that dominant logic blocks a neutral analysis of its competitiveness and eco-system. More particular, the organizational mindset hinders the organization to use its full potential to exploit new business model ideas because of its blinding effect (Lang, 2020, p. 439). Tovstiga&Birchall (2014, pp. 1-2) confirm this statement by declaring that "managers of incumbent companies typically fail to recognize disruptions as opportunities because the potential new markets lie outside their existing resource base".

## 2.2 Research Strategy

The research strategy is composed of a research funnel, which consist of consecutive four phases. The first phase is a preliminary research with the goal to identify valid open-access academic research studies in English language through a keyword search. The results are assessed in the primary screening by applying selection criteria (Table 2). The secondary screening evaluates if the present studies contain a business model innovation methodology by screening the abstracts. In the final screening, the identified methodologies are selected if they deal with the dimension "process model" (Figure 4).



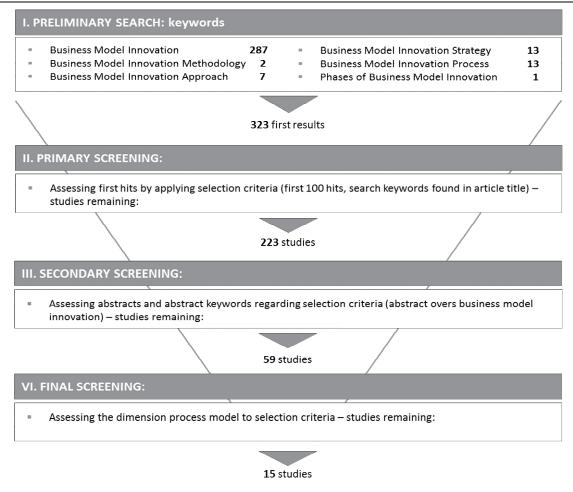


Figure 4. Overview of research strategy and results

In the preliminary research, a keyword search is created using BASE (Bielefeld Academic Search Engine) to identify publications in business model innovation. BASE is one of the world's largest search engines for academic web documents (Lang, 2020, p. 440). The index covers more than 150 million documents from over 7,000 sources. About 60 % of the documents listed in BASE are also openly accessible (Lang, 2020, p. 439). The keywords (Table 1) are used to identify a first set of studies dealing mainly with the topic business model innovation in combination. Overall, the preliminary research generates 323 first results Table 1).

The next three screening phases analyze the results of the 323 first results to extract modern business model innovation methodologies which fulfill the selection criteria. In the primary screening, the 323 results are filtered continuously in four steps. Only the first 100 open-access results per search keyword in English language will be further evaluated (Table 2). This leads to 223 studies. The secondary screening focuses on the abstract of articles by using further research databases (ResearchGate, IEEE Xplore Digital Library, ScienceDirect, Emerald, Wiley.com). The articles shall deal with a concrete methodology for business model innovation. This leads to a further reduction to 59 studies. The final screening focuses only on the studies which cover a concrete described process model. Finally, 14 studies published



2015-2020 fulfill the set of criteria and are suitable for further comparison in the next chapter.

Table 1. First results of preliminary research

Search Keywords	First results
Business Model Innovation	287
Business Model Innovation Methodology	2
Business Model Innovation Approach	7
Business Model Innovation Strategy	13
Business Model Innovation Process	13
Phases of Business Model Innovation	1
IN TOTAL	323

Table 2. Research process documentation

Research Step	Description			
I. Preliminary Screening	Search terms: Business Model Innovation Business Model Innovation Methodology Business Model Innovation Approach Business Model Innovation Strategy Business Model Innovation Process Phases of Business Model Innovation			
II. Primary Screening	<ul> <li>Date of search: 18 June 2020 – 24 July 2020</li> <li>Search keywords identified in the title</li> <li>Academic articles (no text books)</li> <li>First 100 hits sorted by relevance (most cited literature is ranked higher)</li> <li>English language</li> <li>Open-access</li> <li>Publication period 2015-2020</li> <li>No duplicates</li> </ul>			
III. Secondary Screening	<ul> <li>Retrieve and review abstracts in terms of selection criteria</li> <li>Final set of included studies documented</li> </ul>			
IV. Final Screening	<ul> <li>Full-text article available</li> <li>Check if approach covers process model dimension</li> </ul>			

## 2.2.1 Comparison Analysis of Identified Studies (n=14)

The 14 identified studies are evaluated according to their commonalities and differences on their process model. At first, the studies are grouped by their publishing date. Afterwards the features of the studies are evaluated in four steps. In the first step, the studies are grouped according to one of the four the focus topics "business transformation", "circular economy", "digitalization" and "sustainability". In the third step, the process steps within every study are analyzed. Finally, all studies are investigated if and how the organizational mindset is covered in their methodology. Table 3 summarizes the main criteria for comparison.



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Study	Focus Topic	Process Model	Organizational Mindset
<ul><li>Author</li><li>Year of publication</li><li>Journal</li><li>Publisher</li></ul>	<ul><li>Business Transformation</li><li>Circular Economy</li><li>Digitalization</li><li>Sustainability</li></ul>	<ul> <li>Amount of considered steps of selected studies</li> <li>Distribution of considered steps of selected studies</li> </ul>	<ul> <li>Organizational mindset covered by study (not, partly, full)</li> </ul>

#### 3. Results

## 3.1 Descriptive Results of Studies (n=14)

The first research is focused on academic articles in English language covering the keyword "business model innovation" in the title. This leads to a first result of 287 articles. Further research with combination of "business model innovation" and keywords "methodology", "approach". "strategy" and "process" creates 35 additional results. The keyword "phases of business model innovation" leads to one additional article. However, the 36 additional articles are reduced during the three screening phases down to five studies. Finally, after three screening steps, 14 studies are identified for further comparison on their process model and dealing with organizational mindset (Table 4).

Table 4. First results (n = 403) and included studies after final screening (n = 31)

Search Keywords	First results	Included Studies after final screening
Business Model Innovation	287	9
Business Model Innovation Methodology	2	1
Business Model Innovation Approach	7	2
Business Model Innovation Strategy	13	2
Business Model Innovation Process	13	0
Phases of Business Model Innovation	1	0

In general, the paper deals with 14 studies which are published from 2015 to 2020 to focus on the latest research on business model innovation (Figure 5). In total, 7 (50 %) of the investigated methodologies are published in 2017. The other seven (50 %) studies are equally distributed from 2015-2020. Moreover, the majority of the studies (50 %) focus on the topic "business transformation" of established business models into new ones (Figure 6). The focus topics "digitalization" and "sustainability" are mentioned each three times (21 %). The focus topic "circular economy" is covered two times (14 %). In addition, five (36 %) methodologies are based on theories of previously academic authors. Eight (57 %) methodologies are based on case studies or practical experiences of the authors. At least, six of the 14 academic studies (43 %) include interviews in their research.

The first studies are published by Iivarie (2015) and Lindgren&Bandsholm (2016) which both focus on business transformation but from different perspectives. The study by Iivarie



(2015) explore the dynamics of openness within small and mid-range enterprises. Iivarie (2015, p.30) investigates how business model transformation relates to innovation strategy transformation by a case study in order to fully follow transformation as a process. Lindgren&Bandsholm (2016, p. 71) present a detailed business model innovation methodology for transforming a business model with covering six different dimensions. The study by Lindgren&Bandsholm (2016, p. 71–88) is the only study which focus a network-based business model and the possibilities of business model relations in their business model cube.

The seven studies published 2017 represent the majority of this research (47 %). The studies of 2017 cover the topics "business transformation", "digitalization" and "sustainability" from different research questions and level of details. The research of Adrodegari, Pashou&Saccani (2017) focus on the specific topic of process and tools for service transformation of industrial firms. In contrast, Wirtz&Daiser (2017) research on how macro- and micro-level environmental dimensions can be integrated into a conceptual framework. Finally, Vorbach, Wipfler, &Schimpf (2017) are the first and only among the analyzed studies who address the role of disruptive technologies.

The topic "circular economy" in the context of business model innovation is mentioned for the very first time by the research of Pieroni, McAloone&Pigosso (2018) followed by Guldmann, Bocken&Brezet (2019). Pieroni, McAloone&Pigosso (2018, p. 2523) outline a conceptual process for circular economy-oriented business model innovation including activities, tools and outputs. Guldmann, Bocken&Brezet (2019, pp. 58-61) adapt the design thinking process for the use in circular economy.

Finally, Ghezzi&Cavallo (2020, p. 23) focus on the topic "digitalization" by presenting a unified framework. The framework connects business model innovation, lean startup and agile development as a methodology for ide development for early stage digital startups (Ghezzi&Cavallo, 2020, p. 23).

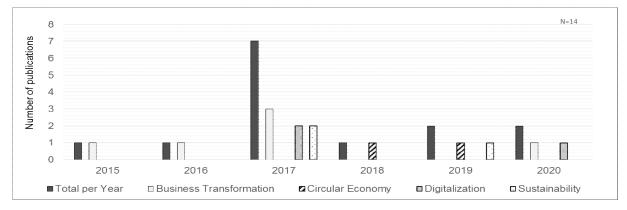


Figure 5. Publications of selected studies over time



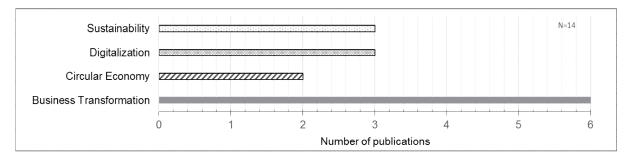


Figure 6. Publications of selected focus topics

Table 5 summarizes the 14 assessed methodologies. In reference to the focus topics of the methodologies (Figure 6) they can be grouped into different application fields. Six (40 %) methodologies focus on "business transformation", which means transformation one business model into a new one. Two (14 %) on circular economy with the aim of eliminating waste and the continual use of resources throughout the whole value chain. Three additional studies (21 %) focus on the empowerment of business models by digitalization and platform models. Finally, three (21 %) approaches are focusing on the development of sustainable business models. The level of detail diverges between a broad overview to a detailed description of ever process step. Five theories (33 %) present a detailed description of the general approach whereas seven studies (47 %) focus on a detailed a detailed process model. Finally, four (27 %) of the 14 studies are industry independent. The other ten methodologies (71 %) focus on a specific industry. In summary, every of the analyzed study deals with one of the emerging mega-trends such as circular economy, digitalization or sustainability. This seems to be in line with the overall mega trends within the past decade.



Table 5. Overview of selected 14 studies on business model innovation

Study	Focus Topics	Process Model (# steps)	Organizational Mindset (
ADRODEGARI, F., PASHOU, T. and SACCANI, N. (2017)	Business Transformation	4	•
GATAUTIS, R. (2017)	Digitalization	3	-
GEISSDOERFER, M., SAVAGET, P., EVANS, S. (2017)	Sustainability	3	-
GHEZZI, A., CAVALLO, A. (2020)	Digitalization	5	-
GULDMANN, E., BOCKEN, N., and BREZET, H. (2019)	Circular Economy	5	-
IIVARI, M. M. (2015)	Business Transformation	3	-
LAURISCHKATA, K. and VIERTELHAUSEN, A. (2017)	Digitalization	4	-
LINDGREN, P. and BANDSHOLM, J. (2016)	Business Transformation	3	
MINATOGAWA, V. et al. (2019)	Sustainability	4	-
PIERONI, M., MCALOONE, T., PIGOSSO, D. (2018)	Circular Economy	5	•
SJÖDIN, D, PARIDA, V., JOVANOVIC, M. and VISNJIC, I. (2020)	Business Transformation	3	-
VORBACH, S., WIPFLER, H. and SCHIMPF, S. (2017)	Business Transformation	4	•
WIRTZ, B. and DAISER, P. (2017)	Business Transformation	4	-
ZHANG, H., SUN, X. and LYU, C. (2017)	Sustainability	3	-

## 3.2 Qualitative Results of Studies (n=14)

## 3.2.1 Process Steps Analyzed

For generate findings on the research status on process steps, the process models of the identified 14 studies are also assessed (Figure 7). The review on business model innovation in general underlines that research strongly focuses on describing a process to serve as a guideline for companies to innovate their business model.

At first, the steps of every process model are counted, analyzed and finally compared to the other selected studies. Figure 7 gives an overview of the number of process steps per study. Secondly, the process steps are grouped to the generally accepted steps of business model innovation (Schallmo, 2013, p. 109) throughout all selected studies.

The findings show that out of the generally accepted steps (Schallmo, 2013, p. 109) only "analysis" and "creation" are part of all 14 scientific studies (Figure 7). This reveals that research primarily focuses on those two steps. Seven studies (50%) also mention the



implementation step and two studies (14 %) contain a steering phase. The initiation step is only described by Pieroni, McAloone&Pigosso (7%) (2018, p. 2523).

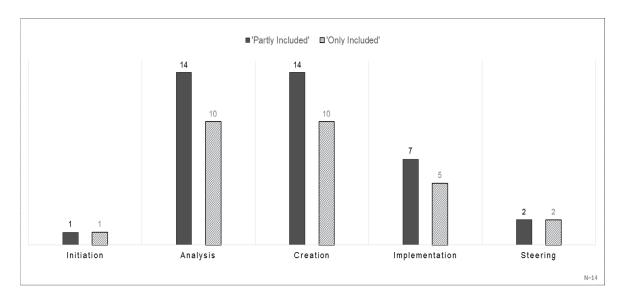


Figure 7. Considered process steps in selected studies

## 3.2.2 Organizational Mindset Addressed in Included Studies

Despite the extensive research on the methodology itself as well as the process models, the role of organizational mindset as well as its blinding effect is not addressed sufficiently. Instead, the authors focus on a logical sequences of steps without considering organizational behavior in their studies. Among the revised business model innovation methodologies, only Adrodegari, Pashou&Saccani (2017, p. 107), Vorbach, Wipfler, &Schimpf (2017, pp. 382-385), Pieroni, McAloone&Pigosso (2018, p. 2523) acknowledge a predominant mindset as an innovation barrier. Adrodegari, Pashou&Saccani (2017, p. 107) mention an "organizational approach" which needs to deal with the change of mental models. The researchers name to change the mental model to see business opportunities as a potential source of value creation without going more into detail (Adrodegari, Pashou&Saccani, 2017, p. 107).

In similar, Pieroni, McAloone&Pigosso (2018, p. 2523) mention" behaviors and learning abilities" as change enablers. They advise organizations of being aware of their core beliefs and need to question linear assumptions but without concrete tools or advices (Pieroni, McAloone&Pigosso, 2018, p. 2523).

Finally, Vorbach, Wipfler, &Schimpf (2017) are the researchers attempting to address the role of disruptive technologies and path-dependencies of incumbent business models (2017, p. 384). The Vorbach, Wipfler, &Schimpf (2017, p. 384) emphasize that the dominant business models of incumbent companies can create a self-restriction especially in businesses affected by disruptive technologies. In summary, all three studies by Adrodegari, Pashou&Saccani (2017, p. 107), Vorbach, Wipfler, &Schimpf (2017, pp. 382-385), Pieroni, McAloone&Pigosso (2018, p. 2523) give thought-provoking impulses for dealing with



organizational mindset without establishing their advices in their methodologies which leads to a proven research gap.

#### 3.2.3 Summary

In summary, after three screening steps, 14 studies are identified for a detailed comparison. The methodologies, published between 2015 and 2020 focus on one of the topics "business transformation", "digitalization", "sustainability" or "circular economy".

After clustering the process models of the 14 studies shows that out of the generally accepted steps analysis, creation, implementation and steering only analysis and creation are part of all 14 scientific studies. The process steps analysis and creation are only included in all 14 studies. This exposes that research primarily focuses on those two steps. Thus, it is concluded that to innovate business models, all common business model elements and process steps need to be covered by the respective methodology.

Despite the extensive research on process models, the role of organizational mindset is only addressed by the following three methodologies Adrodegari, Pashou&Saccani (2017, p. 107), Vorbach, Wipfler, &Schimpf (2017, pp. 382-385), Pieroni, McAloone&Pigosso (2018, p. 2523). The researchers admit organizational mindset as an innovation barrier however do not give solid advice in their methods how to deal with it in a successful manner.

It is recommended to conduct further research on the predominant organizational mindset within all four steps as well as concrete methods to overcome it.

## 4. Discussion

The systematic literature review analyzes the research status in business model innovation from 2015-2020. This extends previously published papers by Lang (2020), Schallmo (2013), Bieger&Reinhold (2011) as well as Boulton et al. (2000) which compare existing business model innovation methodologies as a basis for their respective approach. The result of this paper exceeds the previously mentioned studies above, as it compares the latest 14 studies published between 2015 and 2020 on their business model innovation methodology.

Moreover, the paper takes special consideration on the investigation how organizational mindset is addressed in the latest studies. At first, the research results generates evidence that there is no common definition on the term business model and business model innovation. Secondly, the evaluated 14 studies, as a result of three consecutive screening phases, aim at different process models based on their innovation focus. The focus of each of the 14 studies can be grouped into one of the mega-trends "business transformation", "digitalization", "sustainability" or "circular economy". One can assume that this is in line with the overall market trends of the past and current decade.

In addition, during the analysis of the 14 process models, it is evident that analysis, creation, implementation and steering are generally accepted steps. As the steps analysis and creation are included in every study. This implies that academic research is primarily focused on them.



In this context, a special focus is on the addressing of organizational mindset of established companies in the selected 14 studies. An important finding is that among the reviewed business model innovation methodologies, only Adrodegari, Pashou&Saccani (2017, p. 107), Vorbach, Wipfler, &Schimpf (2017, pp. 382-385), Pieroni, McAloone&Pigosso (2018, p. 2523) consider organizational mindset as an innovation barrier. Adrodegari, Pashou&Saccani (2017, p. 107) mention an "organizational approach" which needs to deal with the change of mental models. In similar, Pieroni, McAloone&Pigosso (2018, p. 2523) mention" behaviors and learning abilities" as change enablers. Finally, Vorbach, Wipfler, &Schimpf (2017) emphasize that the dominant business models of incumbent companies can create a self-restriction especially in businesses affected by new technologies. In summary, all three studies give thought-provoking impulses for dealing with organizational mindset without establishing their advices in their methodologies which leads to a proven research.

In conclusion, the findings create evidence that the role of organizational mindset is still insufficiently covered in the selected studies on business model innovation. This finally demonstrates an evidence that the systematic integration of organizational mindset in business model innovation methodologies is unrepresented and needs more attention in future research.

## 5. Conclusion

The research aim of the systematic literature review is to generate findings about the academic status quo of on business model innovation with a special focus on organizational mindset. This is realized through an evaluation of 14 selected studies identified in a consecutive selection process of three phases. The selected studies are examined and evaluated on their process model in detail. The research evidence that all analyzed studies have a different focus on one of the current mega-trends "business transformation", "digitalization", "sustainability" and "circular economy". During the analysis of every process step, it becomes evident that analysis, creation, implementation and steering are generally accepted steps throughout all modern studies.

An important finding is that overcoming the organizational mindset as a main barrier in business model innovation is addressed by three studies but not systematically integrated in any of them.

In summary, the findings of this paper highlight that the academic research in the field of business model innovation is not sufficient and further research has to follow concerning the following: (1) business model innovation methodologies are needed with detailed process models. (2) Furthermore, more specific business model innovation methodologies with on the mega-trends like sustainability and circular economy are needed. (3) Finally, the overcoming of the dominant organizational mindset in business model innovation methodologies needs to be systematically integrated in detail in future studies.



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