

Business Model Development: A Customer-Oriented Perspective

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Abstract

Purpose: This study provides a business model development framework that explicitly focuses on the customer as well as integrating customer knowledge into the development process for enhanced value creation. The proposed framework shall enhance our understanding about this phenomenon and present a helpful guidance for researchers and practitioners.

Design/Methodology/Approach: The study follows a conceptual approach that is based on insights from prevailing literature. The deduced findings are illustrated with supplementary context from a prominent case study.

Findings: The findings underline the importance of customer-orientation for successful business model development. Furthermore, business model development should follow an actively managed, systematic approach that takes into account distinctive customer groups, business model change intensity, and business model development types. The presented framework provides fruitful avenues for future research and valuable guidance for management.

Practical Implications: The presented framework provides managers with a tool to plan and organize their business model development process.

Research limitations: Given the vast amount of academic journals, it is unlikely that every applicable scientific publication is included in the analysis. The illustrative example is descriptive in nature, and thus, does not possess empirical validity.

Originality/Value: The main contribution of the study is the explicit transfer of important aspects of the market orientation literature to the business model development phenomena and the strict integration of the customer into the associated process. Thus, this study provides a customer-oriented framework on business model development that supports the field's conceptual progress. Furthermore, the study supports the normative debate in the business model literature.

Keywords: Business model; customer; innovation; development; framework

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Introduction

In 1954, Drucker (1954, p. 37) stated that “it is the customer who determines what a business is”. Since that time, customer perspectives have become vital concepts in many scientific disciplines. The customer also plays an important role in the business model field (Foss and Saebi, 2016; Osterwalder et al., 2010; Wirtz et al., 2016b), which, for instance, emphasizes the importance of customer value creation (cf. Amit and Zott, 2001; Rhoads, 2015; Teece, 2010). Furthermore, the creation and development of business models strongly depends on the customer, who can be an important contributor for business evolution and innovation (Johnsen et al., 2006; Öberg, 2010; Thomke and Hippel, 2002). In particular, when exploring “the business model concept through the lenses of organization design and strategy, [...] the focus on customers and the ability to create value for a customer plays a major role in delineating of the business model construct” (Rhoads, 2015, p. 39). From this perspective, the customers can be seen as a vital source of strategic input (Buur and Matthews, 2008; Hippel, 1986; Prahalad and Ramaswamy, 2000) that needs to be considered to keep them satisfied and to provide lasting superior value (Hienerth et al., 2011; Pynnönen et al., 2012).

Considering the necessity for constant business model development (BMD), it is remarkable that there are many open research issues on how business models evolve (Foss and Saebi, 2016; Spieth et al., 2014; Wirtz et al., 2016a). In particular, when looking at the results of our literature review, we noted a lack of business model frameworks that consistently connect a company’s customer base with the required BMD. This shortcoming has also been detected in recent publications on business model innovation, in which the authors, for example, assert that “despite the many good attempts to define business models, there are a limited number of frameworks that are capable of taking customer-driven change into account” (Pynnönen et al., 2012, p. 5), express a shortcoming of comprehensive frameworks that support managers in innovating their business models (Frankenberger et al., 2013), or criticize a lack of concepts that present “an integrated customer-driven BMI framework” (Wirtz et al., 2016a, p. 14).

Given the importance of the customer for BMD and the finding of Rhoads (2015, p. 39) that “most management

research on business models does not specifically address the overlap with customer marketing focused research”, we see a great need for research concerning customer-oriented business model development (COBMD). This argumentation is reinforced by a recent call for papers of the Academy of Marketing Science, in which the authors also expect to provide an impetus for research concerning a customer-centric perspective on business model development (Gatignon et al., 2016). Therefore, this study tries to develop a COBMD framework—in the form of an abstract representation of vital elements of the BMD concept within a structural frame displaying their theoretical connections—that explicitly puts the focus on the customer, and thus, supports integrating customer knowledge into the BMD process and tailoring the BMD to the customers’ needs and preferences for enhanced creation of value with customers (Prahalad and Ramaswamy, 2004).

Apart from that, several researchers claim that—given the high but dispersed amount of knowledge available (Carayannis et al., 2015; Schneider and Spieth, 2013; Wirtz and Daiser, 2017)—there is also a need for a normative approach to create a common understanding and a common language of important BMI concepts (cf. Bocken et al., 2014; Massa and Tucci, 2014; Wirtz et al., 2016a) since this would support a faster and more sustainable development of the field (Bocken et al., 2015). By its very nature, the COBMD framework also contributes to this debate since a conceptual framework adds to the common understanding of a topic by classifying existing knowledge and integrating it into a unified concept (cf. Lambert, 2015; Taran et al., 2015). From a practical perspective, this study intends to support business model management by presenting vital BMD elements and demonstrating their conceptual connections.

Since the conducted review of existing scientific literature could not clarify what a COBMD framework looks like, we aim to develop such a framework. This exploratory study addresses this challenge by drawing from scientific literature and complementing the deduced findings with an illustrative example. Thus, we follow a conceptual descriptive approach, which seeks to guide academics and practitioners on how to assess the relevant aspects of COBMD and on how to strategically integrate the customer perspective into this concept.

To achieve the previously mentioned goals, the article proceeds as follows: After a brief outline of the conceptual background of the study, we present the state of research on COBMD frameworks. As the scientific literature on this subject is sparse, we went on to develop the framework by integrating knowledge from related fields, in particular from the market orientation literature. Having deduced the COBMD framework, we use Google as an illustrative example since this company conducted numerous successful BMD during the past two decades (Goggin, 2012; Steiber and Alänge, 2013; Wirtz, 2016). The article concludes by presenting the associated findings, implications, and takeaways for academics and business model managers.

Conceptual Perspective

From a scientific research stream perspective, this study builds upon market orientation and business model literature. The market orientation literature comprises a set of publications that puts the customer as a prime perspective (Gheysari et al., 2012). Market orientation refers to the phenomenon that companies that continually satisfy customer needs better than their competitors create a competitive advantage and can enjoy superior profitability (Day, 1994; Jaworski and Kohli, 1993; Kirca et al., 2005; Kohli and Jaworski, 1990). Although the concept itself had already been around since the 1950s, market orientation research took up pace in the management-oriented marketing literature in the beginning of the 1990s (e.g., Jaworski and Kohli, 1993; Kohli and Jaworski, 1990; Narver and Slater, 1990). Later, this topic also started to enter strategic management research (e.g., Connor, 2007; Dobni and Luffman, 2003; Greenley, 1995; Hult et al., 2005; Hult and Ketchen, 2001; Slater and Narver, 1999).

Given the customer-driven business model development perspective of the study, we thus investigate the related phenomena from a market orientation context, focusing on business model activities that occur in response to obtained customer intelligence (cf. Kirca et al., 2005; Kohli and Jaworski, 1990). Concerning the business model concept, this study looks at it from an activity system view that offers a systemic perspective (cf. Zott et al., 2011). Therefore, we apply a recent definition of Wirtz (2011, p. 65) who specifies a business model as “a simplified and aggregated representation

of the relevant activities of a company that describes how marketable information, products and/or services are generated by means of a company’s value-added component”.

To characterize the term BMD, we follow the approach of Casadesus-Masanell and Zhu (2013) who thematically demark their topic by referring to Schumpeter’s (1934) five types of business alterations: new products, new methods, new sources, new markets, and new ways to organize business. Since each of these five types normally affects a company’s activities, they demand modifying the existing or creating a new business model—be it a slight evolutionary change or a game-changing innovation. Therefore, Schumpeter’s business alterations in return represent the range of practical outcomes of BMDs. Against this background, BMD summarizes a set of existing research fields that deal with business model dynamics. Following this approach, this study applies the term BMD to any evolution and innovation changes that occur within an existing or emerging business model (cf. Jensen, 2014; Wirtz et al., 2016b).

Literature Review

Since customer-driven business model frameworks have so far not been the topic of particularly intense discussions, this investigation follows the implicit suggestion of Rhoads (2015) to expand the literature review to customer-focused research. Considering the extensity and heterogeneity of the associated literature, we conducted a query of four academic databases (Academic Search Complete, Business Source Complete, and EconLit via EBSCOhost as well as Web of Science) to identify relevant business model frameworks. We searched the databases for peer-reviewed academic publications, which are expected to be high-quality, up-to-date scientific research (cf. Certo et al., 2009; Webster and Watson, 2002), that showed search term combinations of framework or business model and user, customer, client, market, centric, oriented, driven, or customer relationship management in the title or abstract. Given the broad set of search terms and the broad spectrum of academic journals, which are included in the four databases used, we are confident that this approach captures a meaningful census as recommended by methodical literature (cf. Webster and Watson, 2002).

Finally, we could identify seven studies that investigate customer-driven or market-driven BMD and provide a tangible framework or strategic concept to the reader. Yelmo et al. (2008) propose a business model for telecommunications services, in which customers become the collaborating third parties. Thus, the operator provides a platform, on which customers can create and execute content or services, creating a network of customer-generated services. Due to the practical orientation of their business model and the industry-specific service platform, the proposed model is not suitable to serve as a conceptual COBMD framework.

Hienerth et al. (2011) applied a multiple case study design to explore the implementation of user-centric business models as a complement of traditional, established business models. Here, user-centric refers to all external stakeholders. Since external stakeholders also include customers, their study appears as relevant. They identified six success factors for engaging users in business processes (real-time user-to-user interaction, transparent intellectual property policy, non-monetary incentive system, user entrepreneurship program, corporate strategy alignment, continuous communication and feedback loops). Although they provide straightforward implementation and management-oriented insights concerning success factors and strategy recommendations, the study does not provide a COBMD framework.

Pynnönen et al. (2012) present a case study-based research on customer-driven business model innovation. They conclude that a customer perspective on business models helps companies to align business with the current and emerging customer needs and that BMD is an iterative process that is mandated by external changes. Thus, their study recommends an iterative approach that is divided into four recurring phases: analyze the customer value preferences, innovate the business model, implement a customer survey to test the new model, and adjust the model. With this four-phase framework, Pynnönen et al. (2012) present a four-step activity procedure of handling BMD. However, due to the framework's process focus, it cannot provide the reader with the relevant managerial, organizational, and strategic factors that need to be considered for effective COBMD.

In their longitudinal case study, Wu et al. (2013) investigate the influence of customer knowledge on value creation and the role of IT in value delivery and value capture. Their conceptual model illustrates the links between customer knowledge management and IT-based business model innovation. In sum, effective customer knowledge management creates customer value through enhanced customization, better purchase decision-making, and improved customer experience, fostering the customers' overall consumption experience. While the model of Wu et al. (2013) is not intended to serve as a conceptual framework for BMD, they nevertheless show that it is important to integrate customer knowledge into BMD.

According to Frankenberger et al. (2013) the business model research field lacks a comprehensive framework that supports companies in BMD. For this reason, they elaborated the 4I-framework, which structures BMD along four generic phases: initiation, ideation, integration, and implementation. Their framework presents an iterative process that provides a clear implementation roadmap for companies. Since they focus on a process-based concept for practical business model innovation, the study scope does not cover the aspects of different customer groups or customer-specific knowledge integration.

Dalby et al. (2014) propose a conceptual framework that helps managers to develop business models if these are expanded into another cultural context. For this reason, they combined business model theory (Osterwalder et al., 2010) with national culture (Hofstede, 2001). Although Dalby et al. (2014) present a clear-cut framework to prepare a business model transfer to a new cultural environment, this approach is highly specific.

Kohler (2015) investigated several crowdsourcing platforms and conducted a series of management interviews to identify success factors and successful patterns of crowdsourcing-based business models. Since he found out that these companies could not only benefit from the creativity and knowledge of many contributors—including their customers—but build a crowd-driven business model that is different from traditional producer-consumer transactions, this article also contains

helpful information for BMD initiatives. However, the study does not provide a COBMD framework.

Based on the results of the literature review, we conclude that scientific literature on BMD research has so far not intensively investigated customer-oriented frameworks and has only paid little attention to the customer's crucial role in this endeavor, which is in line with the findings of Pynnönen et al. (2012), Frankenberger et al. (2013), Rhoads (2015) and Wirtz et al. (2016a). The few existing approaches that in some way address this topic rather show processual concepts that focus on procedures and workflows for customer-oriented business model implementation or define customer-oriented business models instead of reflecting customer-driven change. Apart from that, they follow a one-size-fits-all principle that does not take into account a segment-specific BMD, which considers distinct customer and development types. Considering the importance of the customer and the constant requirement for BMD, the results of the literature analysis underline the previously mentioned need for research. Therefore, this study elaborates a framework that explicitly puts the focus on the customer showing elements that are of particular relevance for successful COBMD.

Conceptual Framework for COBMD

Market orientation is about putting the customer first (Deshpande et al., 1993; Houston, 1986; Jaworski and Kohli, 1993). Following this principle in business model management means to integrate the customers' needs and preferences into the BMD activities (Osterwalder et al., 2010; Pynnönen et al., 2012) or in other words, move from innovating for customers to innovating with customers (Desouza et al., 2008; Nambisan, 2002). Thus, the customer is the starting point for COBMD.

Starting with the customer

The identified customer-oriented business model approaches do not differentiate between different customer groups and their requirements. We believe that a BMD specifically needs to take into account the particular customer preferences of the customer groups that are affected or to be addressed by the change. Because irrespective of the type of change applied, creating value for the customers remains the core principle of business models (Amit and Zott, 2001;

Rhoads, 2015; Teece, 2010) and "not all customers are alike" (Ganesh et al., 2000, p. 65). Therefore, a COBMD framework requires a conceptual segmentation of a company's actual and potential customer base.

Since we could not identify an adequate conceptual segmentation in the extant scientific literature, we have elaborated the customer groups based on different concepts. Given that the COBMD framework is based on a business model developing organization mindset, we chose a demand-side perspective on the primary level (customer groups) to arrange the underlying customer needs and preferences in a transparent and applicable manner. Thus, the customer groups that are introduced in the following represent clusters that contain distinctive sets of customer needs and preferences. A further benefit of using a customer group clustering is the easy transferability into the management practice since managers are used to apply comparable clusters or dimensions when generating and using customer intelligence.

The life cycle classification of customer relationships of Campbell and Cunningham (1983) forms the basis of the conceptual customer group segmentation. They applied the life cycle concept to customers, dividing them into three groups: tomorrow's, today's, and yesterday's customers. Tomorrow's customers are those customers that the company tries to gain or regain. Today's customers are old-established customers with continually engaged relationships. Yesterday's customers buy small volume or see the products or services as pure commodities. We combine today's and yesterday's customers into one group (steady customers) since both show a long established customer relationship and a high service offer experience. Therefore, these two groups are expected to show similar customer needs and preferences.

Tomorrow's customers are denominated potential customers, which also include new customers. This group looks back at a short customer relationship and is different to steady customers since they do not show the same level of satisfaction, involvement, and loyalty like steady customers (Ganesh et al., 2000), have less customer experience, and require more development activities. However, they also show ample development potential and can have a considerable impact on new

ventures and positively affect firm performance (Kirmiani and Rao, 2000; Wang et al., 2014). Summing up, we derived three general conceptual customer groups: steady, new, and potential customers.

Ganesh et al. (2000) divide the customer base into switchers and stayers on the first level. Switchers come from competitors and stayers are first-time customers that do not come from any competitor. Since these two groups differ significantly and show a distinct service offer experience level, we further divide the new and potential customer segments according to the relevant service offer experience background. The idea behind this classification is that new or potential customers that are service offer experienced have different information requirements and preferences than those that have no or only very little service offer experience. This deduction is based on the marketing classification of current and potential demanders, in which, for example, distinct information and experience backgrounds are seen as key differences (Meffert et al., 2012). Figure 1 summarizes the segmentation of the conceptual customer groups. This is the first part of the framework, which is developed further in Figure 2 and Figure 3.

Having determined the different customer groups, the next step that we expect is the identification of the respective customer preferences and the collection of relevant customer knowledge since this particular customer intelligence needs to be generated to coordinate the consequential business model development

activities. In this context, we follow the understanding of Shapiro (1988), Day (1990), Kohli and Jaworski (1990), or Prahalad and Ramaswamy (2004), who expressed the importance of acquiring customer information and knowledge, use it to develop and implement new strategies, and integrate it into all important corporate activities. From a BMD perspective, this means to incorporate customer input into BMD, to integrate customer intelligence into the BMD process, and thus, to create value by using customer knowledge (Hienerth et al., 2011). For this purpose, companies should make systematic use of all available customer interfaces to connect with the customer.

Connecting with the customer

The customer interfaces are the actual connection between the company and the customer (Rayport and Jaworski, 2004). Here, recommendations, statements, questions, and complaints of customers can be accumulated and transferred into knowledge (Nambisan, 2002), which can be used for deriving new value-adding products, services, and activities, based on customers' expressed demands. This usually happens via a broad collection of customer interfaces, which can be of human (e.g., clerks) and automated (e.g., voice response units) nature. The managerial challenge as well as the key to success is to combine them into one coordinated system (Rayport and Jaworski, 2004) since not all customer interfaces are equally suitable to interact with the distinct customer groups.

Following Rayport and Jaworski (2004) there are different types of customer interfaces, which can be classified according to their specific interaction character. At this differentiated level, one speaks of customer touch points. These can be divided into three types (information points, service points, and transactions points), according to their primary function. Information points provide information to customers (e.g., company, product, or service information on a website). Transaction points deal with the conduct and completion of the product or service transaction (i.e., service-offer transaction at the cash desk, in the sales room). Service points handle customer service activities that are provided before (i.e., pre-services such as appointment and delivery) and after (i.e., after-service such as complaint management, satisfaction calls) the transaction.

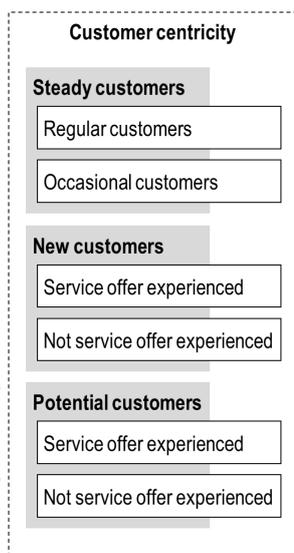


Figure 1: Conceptual Customer Group Segmentation

By covering pre-service, service offer, and after-service, the three customer touchpoints can be used to gather customer knowledge throughout the entire interaction phase. From this perspective, they are a valuable tool to effectively manage the customer dialogue, and thus are the company's interface for customer knowledge management, supporting value creation for the customer and increasing the company's competitive advantage (Campbell, 2003; Garcia-Murillo and Annabi, 2002; Smith and McKeen, 2005). This way, customer knowledge management moves customers from being a passive information source to empowered knowledge partners (cf. Gibbert et al., 2002).

Customer knowledge can be gathered through typical market research and open innovation tools (for further details compare, for example, Gebert et al., 2003, Burns et al., 2014, and Guertler et al., 2015). Analyzing customer transaction and service data, customer complaint management data, customer interviews and surveys as well as market investigations are common methods to collect customer and market data (Burns et al., 2014; Gebert et al., 2003). Ideation platform allow customers to submit, comment, and rate ideas and concepts (Kaplan and Haenlein, 2010). Immersive product improvement is done through a systematic feedback channel, which is provided to the customers. This way, they can bring in their ideas and give feedback to positive and negative product or service aspects (Kirschner et al., 2011). Toolkits allow customers or partners to create or customize own designs (Piller et al., 2004). Netnography is a

systematic approach to analyze current opinions of an existing community that is regarded as a helpful source of information (Belz and Baumbach, 2010). Ideally, these communities contain lead users—customers that have profound product or service experience and show particular needs earlier than the majority of the customer base (Hippel, 2005).

Malhotra (2000) proclaims that companies have to continuously interpret the signals of the market, process the collected information, and make sense of the customer information to generate applicable intelligence since there is a constant organizational need for knowledge creation and renewal if they want to remain in the market. In a similar fashion, Kastalli et al. (2013) and Denicolai et al. (2014) recommend to exploit external knowledge for lasting value creation. Figure 2 summarizes the conceptual interfaces and processes for acquiring customer intelligence and expands the conceptual customer group segmentation, which is depicted in the previous figure.

Turning customer knowledge into intelligence

The gathered customer information bits and pieces, which reflect specific customer needs and demands, have to be arranged and combined into potential future business model scenarios that allow to identify the gap between them and the current business model(s). Thereby, relevant customer knowledge turns into intelligence since it becomes “an innate capacity to use information in order to respond to ever-changing

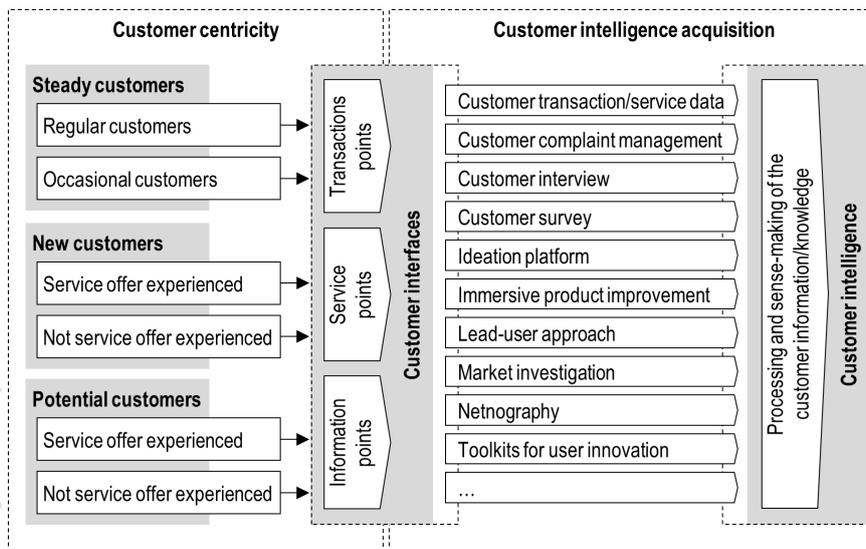


Figure 2: Customer Intelligence Acquisition

requirements" (MacFarlane, 2013, p. 19). Using this intelligence allows the company to determine the required intensity of business model change, which can be divided into four change intensity levels (cf. Wirtz, 2011): stabilization, moderate change, strong change, and radical shift. Although the terms cannot be distinguished incisively due to their floating transition, the awareness concerning the four distinctive business model change intensities is an important takeaway since differing implications are connected with the particular levels of change.

Stabilizing an existing business model, for example, is expected to place different BMD demands on a company than a radical shift. Furthermore, the customer preferences and knowledge of the associated customer groups need to be balanced according to the desired BMD target. In addition, the company should distinguish between the customer groups' information and interaction requirements that result from the BMD. Therefore, each level of change intensity is expected to require an individual customer-oriented development set. In the next step, the determined intensity of business model change is transferred into the respective BMD type. These generic BMD types are important to both academics and practitioners since this approach provides a structural context for articulating a BMD. Moreover, companies using clear BMD descriptions built up a competence for introducing anticipated change through BMD execution (Linder and Cantrell, 2000).

This study uses five distinctive BMD types (cf. Linder and Cantrell, 2000; Wirtz, 2011): The stabilization model uses only little business model modifications to make the existing business model resistant to current change. The evolution adaption model continually adapts to environmental changes with detailed modifications, while its basic structure and components rather remain constant. If the basic structure of the business model is maintained and one or more of its components are subject to significant change because new activities or functionalities are added, this refers to an extension model. In contrast, a migration model changes the basic structure due to a redesign of the business model component interactions, but more or less keeps the components untouched. In the case of the radical innovation model, both the structure and its components are transformed or newly created.

Applying customer intelligence

The applied BMD type may relate to a business model evolution (BME) or innovation (BMI). While the stabilization and evolution adaption are expected to refer to a BME and the migration and radical innovation model to a BMI, an extension model—depending on the intensity of development—may refer to either of them. Although a strict separation can be difficult in particular cases, it is important to consider both alternatives. As a rule of thumb, BME requires an existing business model that is gradually being modified. BMI calls for a change of the value proposition, modifying the value creation for the customer, or a value constellation, modifying the value chain (cf. Chesbrough, 2013; Magretta, 2002; Teece, 2010). Moreover, BMI usually demands a business model prototyping that entails more than just a mock-up of the product or service. This refers to a prototype of the entire business model, meaning to set up and configure the associated strategy, resources, competencies, financing, and so on.

Based on the combination of the relevant customer groups, the underlying customer intelligence, the predetermined intensity of the business model change, and the BMD type, the business model manager can prepare a customer-oriented business model development set, which uses segment-specific customer-oriented knowledge and provides an integrated approach to BMD. This way, the company follows a market-oriented BMD approach and moves from a one-size-fits-all to a systematically tailored customer group-specific BMD. In contrast to this combinatory, strategic character of creating customer-oriented development sets, the BMD process itself follows a linear processual realization structure (for the following cf. Wirtz, 2011). In both forms, the process starts with a feasibility study that takes a detailed look at the customer-related demand impact of the planned COBMD, taking into account the distinctive customer groups of the company. In the case of a BMI, the next step is the prototyping phase during which the business model is put into practice for the first time and fine-tuned until one final version or a set of final alternatives of the future business model are elaborated. After making the decision about the final BMD, the determined BMD is implemented. Implementation usually does not follow a linear process but rather requires constant revisions to adjust the status quo to possible deviations. Having

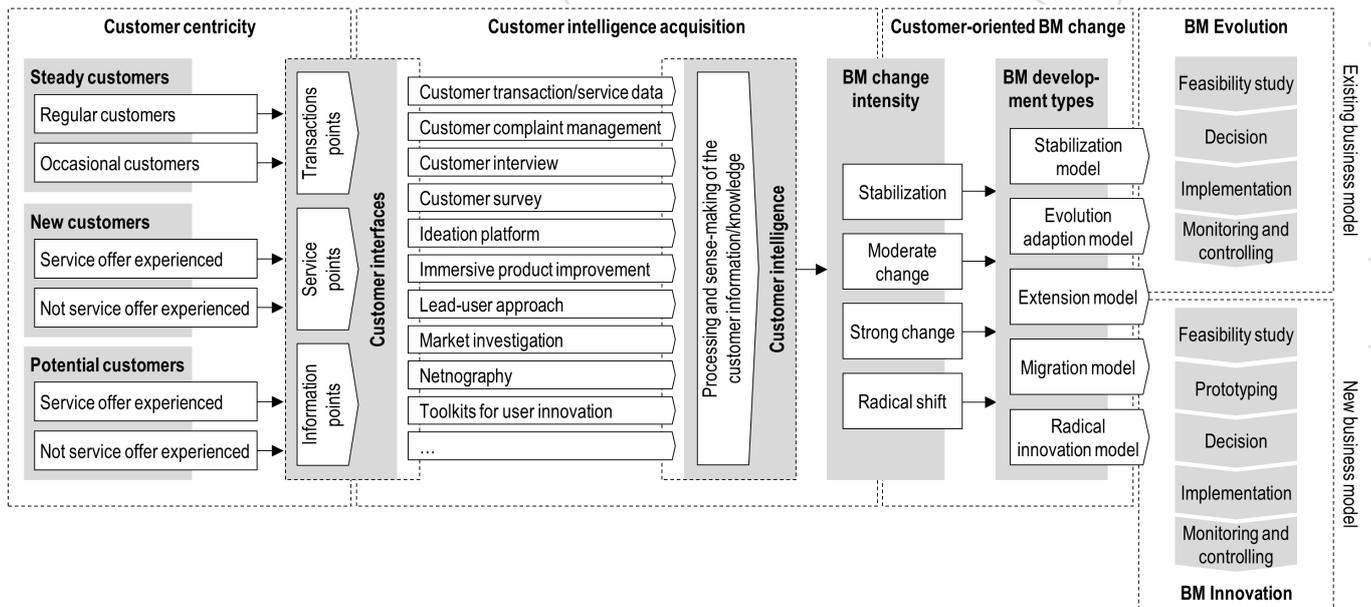


Figure 3: Integrated Framework for Customer-oriented Business Model Development

implemented the BMD, the performance of the business model needs to be steadily monitored and controlled to ensure proper operation. Figure 3 illustrates the components of the COBMD framework and their connections and complements the previous figures.

In the following, we complement the deduced conceptual findings with supplementary context from a prominent case study to highlight the elements of the COBMD framework with descriptive examples and to enrich the investigation’s explanatory power (cf. Eisenhardt, 1989; Eisenhardt and Graebner, 2007).

Business Model Development Example: Google

Google Inc. is a worldwide operating technology company that specializes in Internet-related services and products, including search engines, online advertising, software, location, cloud, and email services. Google was founded in 1998 and quickly turned from an Internet start-up into one of the world’s largest technology companies within a couple of years. In contrast to most other companies, Google does not rely on an established, persisting business model, but a professionally planned one that is continually extended and enhanced. The company’s BME and BMI endeavors constantly develop its business-relevant activities to generate marketable information, services, and

products. This makes Google a highly diversified company, creating an aligned network organization that pursues its core objectives by reasonably and strategically using each part of its network. One of Google’s key success factors for this rapid progress is its excellent hybrid COBMD competency. We illustrate this by using two specific examples: (1) the continuous advancement of Google’s web search and (2) Google’s self-driving car.

The search engine is still the core service component, core value proposition and the main cash generator of Google’s business model. Although the look and feel of the search engine website has not changed much over the years, there have been manifold BMEs to increase its efficiency and effectiveness, or in other words, adapt it to the needs and preferences of the users. Google has always been rewriting and refining the search algorithm to bring better search results quicker to the users. These service provision enhancements are made based on gathered customer knowledge from users that use the service offer—that is steady and new customers. Google can collect a large amount of customer knowledge via its transaction points, the graphical user interface of the search engine.

By applying systematic business intelligence analytics, they can derive customer-driven solutions, for example, from user search behavior and search term combinations. In addition, their service points (e.g., online forums, customer support) lead to a conglomeration

of customer knowledge, which can be transformed into products and service development intelligence. At first glance, Google uses their information mainly for one-way communication, informing customers about product and service use and developments as well as new features. However, user traffic and click statistics allow to draw conclusions on customer needs and preferences, which can be used for indirect customer knowledge creation. At this point, Google jumps from a pure product or service development to a business model development since it specifically enhances its value proposition for the customer.

In a similar fashion, the company developed Google Instant, which shows predicted search results (based on frequent search terms and topics) while you type in what you are looking for, to make the search process more efficient for the user. Moreover, the search engine nowadays combines search patterns with user preferences and online behavior to deliver personalized search results. To make search more convenient for the users, Google Voice Search was introduced. This solution allows customers to use the search engine without tiresome typing, you just speak to your online device. In 2012, the company released the online personal assistant Google Now that uses a language interface to proactively answer requests and make recommendations based on user search habits.

Other examples are Google Scholar, which is a freely accessible web search engine that indexes the metadata of academic literature, or Google Knowledge Graph, which is a database that covers the 500 million most searched terms for people, places, and things and associates them with particular meta-context to instantly provide connected add-on information to the user. With the release of the Google Toolbar—a browser integration of the search engine—and Google Mobile—an integrated online search engine in the Android operating system—the company brings the search engine to new environments. When looking at these BMEs, they can be allocated to two business model change intensities: stabilization (search algorithm refinement, Google Toolbar, Google Mobile) and moderate change (Google Scholar, Google Knowledge Graph, Google Instant, Google Voice). Apart from that, they can be assigned to three BMD types: stabilization model (search algorithm refinement, Google Toolbar), evolution

adaptation model (Google Voice, Google Mobile), and extension model (Google Scholar, Google Knowledge Graph, Google Instant). Each of these developments to a large extent used knowledge gained from steady and new customers, trying to improve the service offer to them as well as to potential customers.

When looking at Google's Self-driving Car Project, this radical shift is a textbook example of a BMI. Here, Google entered uncharted territory, requiring the creation of an entirely new business model. This radical innovation model is executed separately from Google's traditional economic activities, has unlimited top management attention, and can make use of all the resources of Google's organization. This way, the Self-driving Car Project can combine the benefits of a multinational corporation with the agility of a startup. Promoted targets of the Self-driving Car Project include to cut down emissions, make driving safer, and allow more people to get around (e.g., disabled persons unable to drive). Despite these altruistic goals, Google still is a business that makes money. Therefore, the new business model will also lead to new revenue streams. Apart from that, its successful development will also support Google's current business model—the search engine—since autonomous driving allows people additional mobile Internet use. Given that Americans, for instance, spend 46 minutes per day driving in the car (NewsRoom, 2015), this is a substantial factor for increasing online traffic, and thus reflects a strategic lever for Google's future revenues.

The underlying radical innovation model permits Google to approach potential customers by entailing new products, new methods, new sources, new markets, and new ways to organize business. While Google so far is rather a pure service company, the emerging self-driving car business unit moves the company also into an automotive manufacturing setting, including typical automotive market revenue streams (e.g., car sales, service fees from after-sales and mobility concepts, royalties from product patents) and working with new business partners (e.g., automotive suppliers and car manufacturers such as Bosch, Continental, General Motors, Toyota, Daimler). This requires to build up fresh competencies and customer interfaces. By handling a complex physical product, Google has to establish—either by doing it themselves or

outsourcing—additional offline customer touch points: Service points (e.g., technical test center, repair shop) will have to be provided in a new manner since these require physical service activities at the product. Similarly, transaction points (e.g., show room) will change to a large extent as customers will expect to see, touch, and test-drive the vehicle before placing an order.

Given all these substantial changes as well as the company's strict customer focus, Google started right from scratch to include customers' needs and preferences in the development of the self-driving car. Since the project aims at potential customers that require different customer interfaces, they also had to specifically expand their customer knowledge and feedback activities. For this reason, Google conducts extensive customer tests and panels as well as market research, netnography, and immersive product improvement activities that help the company to elaborate what customers want and transfer this knowledge into their COBMD process.

Summarizing, Google's high competency of managing BMD allowed the company to quickly become a highly diversified, successful multinational organization. From this point of view, Google successfully manages the entire range of BMD activities—from stabilization to radical shift. We believe that the key to Google's success in constantly developing its business model lies in the company's philosophy, which they outline in the ten things they know to be true. The first rule “#1: Focus on the user and all else will follow” (Google, 2018) determines what should be done, while the other nine basically explain how this should be done—in summary, as effective, efficient, serious, righteous, professional, and innovative as possible. These corporate dogmas make Google focus on providing outstanding user experience and ensuring that all activities are done to ultimately serve the customer, who again constitutes the principal ground of all BMD actions. Based on this customer-centric business conception, Google successfully transforms the knowledge about, from, and for the customer into applicable customer knowledge intelligence, which forms the groundwork for their business model evolution and innovation activities. Equipped with this capacity, Google can determine the necessary business model change intensity and deduce the respective BMD type. This way, they can ensure consistent and continuous COBMD.

Discussion of Findings, Implications, and Limitations

The starting point of this exploratory study was the limited scientific knowledge about COBMD. Considering the necessity of companies to constantly renew their business models and the crucial role the customers play for any business, the lack of relevant BMD frameworks was surprising. Therefore, this study explores important elements of customer-oriented BMD and how to strategically integrate the customer perspective into this concept, aiming to derive a conceptual COBMD framework. For this reason, our article is intended to contribute to BMD research in four ways: (1) enhance our understanding of the role of the customer in BMD, (2) present additional insights into the BMD phenomenon in a general sense, (3) supply important findings and implications for academics and practitioners, and (4) provide a basis for systematic future COBMD research.

Summarizing, the study indicates that customer orientation is a vital aspect. This is in accordance with the findings of other researchers (e.g., Johnsen et al., 2006; Öberg, 2010; Selden and MacMillan, 2006; Thomke and Hippel, 2002) as well as top tier consulting firms (cf. Lamberti, 2013). Furthermore, the foregoing demonstrates a high degree of transferability and applicability of the market orientation principle to a COBMD concept. While the market orientation principle shows assorted characteristics for this phenomenon that range from understanding the customers to adjust the marketing mix (e.g., Houston, 1986) to an organization-wide market orientation to achieve long-term success (e.g., Shapiro, 1988), the COBMD concept highlights the necessity to align the strategic, the market, and the value creation components of a firm, and thus, the entire business with the needs and preferences of the customer (for business model components see Wirtz, 2016). Consequently, the COBMD can be regarded an extension of the market orientation perspective by moving from a marketing leading view to an abstract and holistic business model mindset.

The framework's underlying procedure concerning a COBMD is also in line with the processes that are recommended in the market orientation literature. From a big picture point of view, the COBMD framework starts

by generating and obtaining information concerning the customers' needs and preferences. By transforming this information into applicable intelligence, which is constantly incorporated throughout the BMD activity, the company should apply this intelligence to derive a new or adjust its business model in order to comply with the current and upcoming customer needs and requirements. Through a clear and continuous focus on sustainable and comprehensive customer orientation, companies can thus create and capture value (for similar procedures in the market orientation literature see for example Kohli and Jaworski, 1990 and Martin and Grbac, 2003).

For this reason, the acquisition of customer information is a top priority. However, not all customers are the same. While current service offer experienced customers are expected to be more relevant to BME approaches, potential customers or customers without service offer experience can be more relevant to BMI. This seems reasonable since BME principally deals with the modification of an existing business model and BMI with its renewal or the creation of a new business model. The occasional customers are a further important customer group since they may become regular customers if their preferences are well-understood and effectively integrated into the business model. They are usually a great potential for business expansion since the company already has a business relationship with them, meaning that they do not need to make cold calls to get in touch with this customer group.

Key criteria in the next step are systematic information gathering and knowledge conversion to customer intelligence. From a conceptual perspective, there are three important customer interfaces: Information points are of great relevance to acquire information from future customers as these are the key interface to new and potential customers. Since service points usually require an existing customer relationship, these are valuable interfaces to regular and occasional customers. Transaction points are crucial interfaces in all circumstances since these deal with the actual transaction. Although there are differences concerning the respective customer interfaces, maintaining a high customer group focus without neglecting a general customer orientation across all touch points is essential for effective customer knowledge management (Rayport and Jaworski, 2004).

For collecting customer information, the company can use a variety of tools, which are commonly applied in market research and open innovation (e.g., analyzing customer complaint management data, using customer surveys, netnography). By combining the relevant customer knowledge with the particular customer groups and by deriving the underlying intensity of business model change, the company turns the customer knowledge into intelligence since it becomes an "ability to cope with unpredictable circumstances" (MacFarlane, 2013, p. 19). Hereby, the company should match this information with the current business model to evaluate potential change impacts and the required business model change intensity to finally determine the respective BMD type. This allows the company to actively and systematically include their customers' needs and preferences in their BMD activities, which reduces the risk of losing out on securing promising strategic benefits and value creation potentials.

In light of the obtained findings, we can also derive a variety of recommendations for practitioners: Similarly to the insights from the market orientation research stream, the customer should be the center of attention when dealing with BMD. Thus, the development of the business model must be built upon and made in accordance with the needs and preferences of the respective customer groups. For this reason, there is no one-size-fits-all principle. This approach demands a differentiated customer group specific course of action that is based on a sound fund of relevant customer knowledge and takes into account the predetermined business model change intensity.

The collection of the demand, preferences, and knowledge of the particular customer groups requires the use of distinctive customer interfaces. Here, practitioners should aim at achieving an outstanding customer experience in the channels used in order to avoid annoying or disappointing their customers and create an appropriate mix that suits the respective requirements. Similarly, managers should select an adequate mix of market research and open innovation tools to gather customer knowledge from the particular customer groups. Management has to keep in mind that they need an adequate level of customer knowledge intelligence to establish a customized customer-oriented development set that determines a specific BMD

type and clarifies the final BMD step: BME or BMI. This way, managers provide a structural context for BMD articulation and build up a competence for introducing anticipated change through BMD execution in the long-run.

Despite its contributions to academia and management, this study has several limitations that need to be considered. However, these limitations—regarding the exploratory research approach—provide a sound basis for future research endeavors that would enhance scientific COBMD knowledge. This exploratory study focuses on the positive side of BMD. However, in other cases there may be negative mechanisms or results through which a COBMD may hinder firm performance. According to Veryzer (1998), for instance, an exclusive focus on customer knowledge may lead to an immoderate dependence on customers. Thus, identifying and investigating less successful COBMD situations seems to be an interesting research endeavor.

Against this background, case studies will help to broaden researchers' and practitioners' understanding of COBMD. Here, comprehensive in-depth qualitative interviews focusing on COBMD barriers and success factors are needed to better understand its intricacy. Apart from qualitative studies, future research should also challenge the COBMD framework with quantitative empirical evidence on several levels. We see, for instance, a need for causal-analytical investigations that further clarify which elements of the COBMD framework are important for the respective stage and which factors are the main drivers of overall BMD success. In a similar fashion, future research should conduct quantitative studies that investigate the contextual and environmental success factors of BMD and provide solid empirical evidence for BMD scholars and managers.

Given the study's target of providing a generic framework, it does not take into account that there may be additional variations on a deeper level within the customer groups or the customer intelligence part. For this reason, further studies are needed that provide additional insights into the differentiation of steady, new, and potential customers and if these groups show distinctions concerning the different BMD types. In this

context, future research should also clarify if the five conceptual BMD types are suitable or if there are further BMD types that have not been addressed in the business model literature yet. Concerning the need for further insights on the customer intelligence part in BMD, additional field studies and explorative interviews with BMD experts seem of high value to generate further knowledge on this issue.

Moreover, the theoretically underlying rather direct connection of distinct business model change intensities and specific BMD types should be further investigated. In this context, additional insights regarding COBMD are important, as scholars and managers grapple with the growing demand of ever-changing environmental conditions and continuously altering customer preferences that require constant BMD. In addition, further studies that provide insights on the internal and external conditions that lead companies to a BMI or a BME seem helpful. Here, research should further elaborate the differentiation between BMI and BME and clearly define the transition between the two forms of BMD (e.g., is the transition between those two rather fluent, progressive, or clearly separated?).

The illustration of the market research and open innovation tools is not exhaustive and only reflects their conceptual integration into the framework since such an analysis is out of scope of this article. Here, review studies in the fashion of Guertler et al. (2015) that summarize the status quo are helpful to science and management. Building upon existing knowledge, new studies should also present future concepts and analyze the particular benefits and range of application of the respective tools for customer knowledge generation. Since COBMD often demands to build up fresh competencies for customer knowledge generation and transformation into new business models, examining antecedents and success factors of COBMD appears as a promising direction for future research. In this context, dynamic capability view approaches that deal with the development and renewal of internal competencies (cf. Augier and Teece, 2007) appear expedient. Furthermore, future research should empirically investigate which customer information tools and instruments are of particular importance for deriving customer intelligence in BMD settings. Apart

from that, researchers should challenge the proposed COBMD framework with regards to industry-specific modifications that may be necessary to adapt the framework to particular industry settings since there may be differences among organizations with distinctive structures and processes or among organizations that offer services and organizations that offer products. Concluding, the findings of this study provide various insights into COBMD. Since there also remain open issues further qualitative and quantitative research is necessary to conceptually expand and empirically validate the study's findings.

Conclusion

The customer decides what a business is and how much the products and services of a business are worth (Drucker, 1954). But customers' needs and preferences change—and due to massive external disruptions the speed of change increases. Thus, managers are increasingly confronted with strategic, operational, and systemic shifts that require continuous and effective BMD to adjust the business model to the requirements of the customers. Putting the customers' needs and preferences at the center of any BMD initiative is therefore essential. Furthermore, BMD has to be conducted fast and repeatable since companies today continuously have to act—as reacting can already be too late. Against the still limited understanding of business model development that particularly takes into account the customers' needs and preferences, this is a challenging issue for academics and practitioners. The proposed COBMD framework, which is derived from the business model and market orientation literature, and thus, systematically combines a holistic business model mindset with a thorough customer focus, serves as helpful guidance to research and management in this matter.

Throughout the entire research endeavor for this study, we learned that BMD literature can greatly benefit from the insights of the market orientation literature. Therefore, we hope to see more research that connects these two fields in the near future. The core issues for successful COBMD are a clear and useful customer group specification, the acquisition of customer information, the transformation of the customer information into applicable customer intelligence, the application of the customer intelligence to derive a new or adjust the existing business model, the preparation of the customer-oriented business model development set, and the implementation of the changes that result from the business model development.

Against this background, scientific research should generate further theoretical insights on these issues and provide managers with solid concepts and process cycles that support them in their business model development endeavors. Companies should develop the necessary skills and competencies to learn about, from, and for the customer, to transfer this knowledge into applicable business model development intelligence to better satisfy their customers' needs and preferences, and to successfully implement their business model developments. This way, they can create competitive advantage and participate from the value that they generate for their customers.

Despite its contributions, this study also has several limitations, which mainly result from the exploratory research approach and the study's key goal of providing a generic framework (for details, please see the section "Discussion of findings, implications, and limitations"). Thus, further studies are needed that provide additional insights to enhance scientific COBMD knowledge.

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