Exploring New Business Models for the Social Enterprise

"How can organizations innovate their business model under the influence of customer interactions via social media?"

ABSTRACT

This empirical study aims to explore the impact of customer interactions via social media on business models. Through qualitative research, we obtained data from nine companies in different industries. Consequently, this study encompasses four key findings. First, we found that a companies' use of different social media functionalities can be a useful indicator of customer interaction and customer participation within business models. Second, we found that social media functionality can be used on three (accumulating) levels by firms in terms of intensity and variety to enable the development of their business models and value creation through increasingly structured customer interaction. Third, we found that the role of the customer (*i.e.* customer participation) can vary to three different extents within business models according to the degree to which customers interact with the different pillars and components of the business model. Fourth, we classified and characterized three business model patterns in which customer interaction and customer participation varies depending on the variety and extensiveness of social media functionalities that are being used to add value in several places within the business model. These patterns comprise: (1) the customer-facing business model; (2) the customer-valuing business model and (3) the customer-integrating business model.

AUTHOR

Matthijs Scholten (s1007440)

University of Twente, School of Management and Governance

MSc Business Administration – Innovation & Entrepreneurship

EXAM COMMITTEE MEMBERS

Dr. Kasia Zalewska-Kurek	(1st supervisor)	*University of Twente*
Dr. Efthymios Constantinides	(2nd supervisor)	*University of Twente*
Dr. Ir. Wil Janssen	(supervisor)	*InnoValor B.V.*

DATE AND PLACE

14th April, 2014, Enschede - The Netherlands

This research was assigned by BiZZdesign B.V. (www.bizzdesign.com) as a part of the open innovation research project 'Designing New Models for the Social Enterprise'

1. Introduction

As companies are increasingly expected to become more customer-centric due to rapid technological developments in the global economy (Teece, 2010), business model innovation is becoming one of the primary forces driving strategic renewal efforts of businesses on a global scale (Chesbrough, 2010; Casadesus-Masanell and Ricart, 2010). Amit and Zott (2010, p. 7) further emphasize the importance of business model innovation by stating that *"an innovative business model can either create a new market or allow the firm to create and exploit new opportunities in existing markets"*, thereby advocating a high level of interest for managers, entrepreneurs and academics as well.

Research on the effect of Internet developments on business model development is still in its infancy (Wirtz, Schilke and Ullrich, 2010). The rise of Web 2.0 has created radically new ways for customers to interact with companies and makes it necessary to re-investigate a firm's current business model and the match with its new, dynamic and unpredictable environmental conditions (Teece, 2010; Wirtz *et al.,* 2010; Osterwalder, Pigneur and Tucci, 2005). Teece (2010) further emphasizes the importance of specific new business models, which will be successful in the Web 2.0 context. These business models are likely to differ significantly from traditional business models, which will force companies to abandon their existing business model in order to stay profitable and competitive. Elaborating upon Wirtz *et al.*'s (2010) research proposition, we focus on the empirical context of the Web 2.0 phenomenon as the setting to study business models and further contribute to the theoretical and empirical development of our knowledge related to business model innovation and the role of the customer within business models. As one of the most recent and influential developments, the increasing omnipresence of user-generated content (Plé, Lecocq and Angot, 2010, p. 229) and social networks (*cf.* Kaplan and Haenlein, 2010; Kietzmann, Hermkes, McCarthy and Silvestre, 2011) makes it worthwhile to explore the (re) configuration (s) of business models that (aim to) respond to new and radically shifting Internet user behaviour (Wirtz *et al.,* 2010, p. 273).

Furthermore, within the business model literature, attention shifts from defining and framing the composition of the business model to answering questions like how value is created for the customer and how the innovating firm might appropriate economic value (*cf.* Brink and Holmen, 2007). Within this discussion, Plé *et al.*

(2010) go beyond the view of a customer as a mere component of the business model and provide us with a theoretical framework to study ways in which the customer is connected to the other constituents of the business model (Plé *et al.*, 2010, p. 230). This research took place within the context of the open innovation project 'New Models for the Social Enterprise', assigned by Dutch consultancy company BiZZdesign. This research project was built on the proposition that there is a need for a fundamental business design paradigm shift to optimally cope with the impact of enterprise social software and changing types of business interaction. 'New Models for the Social Enterprise' is a multi-party, public-private project with participation of organizations that share challenges in the domains of social enterprise and business design. The project delivers patterns, good practices and a concrete design approach for the social enterprise. The approach developed will be helpful in designing, analyzing and visualizing the social enterprise. Within this project, this qualitative research explores the functional use of social media in the empirical context of business models of nine companies from different industries. These companies have been selected on the basis of the immediacy in their interaction with customers, which is increasingly taking place on the Internet and on social media applications. This enabled us to map out several business model areas where social media interactions between the firm and its (potential) customers can have an impact and create value for both customers and the organisation alike, based on empirical evidence. These value creating business model patterns will increase our current understanding of how business models can be designed in order to effectively use social media in the context of customer interaction. In the following section, we will briefly address the research questions that are a part of this research in order to enforce the research goals.

2. Research questions

This research aims to investigate how several types of social media interactions can influence the business model. Here, we focus on the corporate use of social media by companies *i.e.* social media interactions between the firm and its customers. More specific, we will investigate several types of interactions on social media. Examples of these interactions on social media include conversations between companies and (potential) customers or the formation of customer communities and groups. Subsequently, it is our goal to identify patterns of business models in which distinct usage of social media functionality by companies has a significant impact on the companies' value creation logic and thus, its business model. Therefore, the following research questions have been constructed:

Main research question: *"How can organizations innovate their business model under the influence of customer interactions via social media?"*
In order to answer the main research question, several sub questions have been derived:

- How can interactions between customers and companies via social media impact the different components of the business model?
- Which customer interactions enabled by social media have a significant impact on the different components of the business model?
- What social media business model patterns can be identified?

In the following section, we briefly describe the current state of the business model concept in the literature after which we adopt the most suitable business model framework to serve this research. Furthermore, we will re-introduce and specify the social media phenomenon and adapt a framework of social media functionality that suits the adopted business model concept. To integrate both frameworks, we propose a 'pattern approach' to structure the results and identify social media business model patterns.

3. Theoretical background

This section is dedicated to introduce, explain and relate the most important theoretical concepts that are part of this explorative research. The main theoretical concepts that have been selected for this research comprise the business model concept and a framework that defines social media in terms of its functionality. Furthermore, we use the concept

3.1 The business model concept

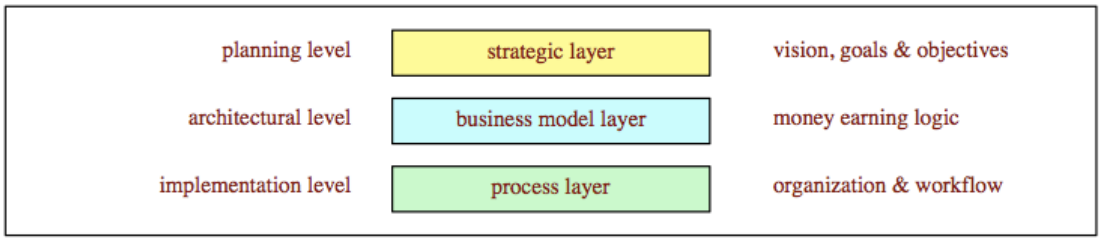
As Magretta (2002) already pointed out roughly ten years ago, a business model is essential to every organization. During the last decade, the term 'business model' has grown from a buzzword during the dotcom bubble by the end of the 1990s into a broadly used and defined concept by both researchers and practitioners. The business model concept has been validated in providing both groups with a powerful way to understand, analyse, communicate and manage strategic-oriented choices (Osterwalder, Pigneur and Tucci, 2005; Al-Debei and Avison, 2010). A business model describes the rationale of how an organization creates, delivers and captures value (Osterwalder *et al.*, 2005; Osterwalder, 2010). Furthermore, the business model concept offers strategists a fresh way of considering their options in uncertain, fast-moving and unpredictable environments (McGrath, 2010)

3.1.1 Positioning the business model

The difference between a business *model* and a business *strategy* is of high relevance, as it positions the business model concept and limits the scope of this research. Although some researchers view the business model and business strategy as identical or even use the terms "strategy" and "business model" interchangeably (Magretta, 2002), Al-Debei and Avison (2010) argue that the business model concept is actually of most use when functioning as a *mediating* concept between business processes and strategy. Casadesus-Massanell and Ricart (2010) build upon the work of Morris, Schindehutte and Allen (2005), whom state that the business model exhibits elements of both strategy and operational effectiveness (p. 733) and upon the work of Osterwalder *et al.* (2005), whom positioned the business model between strategy and business processes. The authors further emphasize the distinction of both business strategy and business models, arguing that the business model concept refers to the logic of the firm, whereas business strategy refers to *'the choice of*

business model through which the firm will compete in the marketplace' (Casadesus-Masanell and Ricart, 2010, p. 196). The authors argue that a business model is a reflection of a firm's realized strategy and that little is gained from separating the concepts when strategy maps one-to-one onto the business model. In line with Teece (2010) we view a business model as being the translation of the company's strategy, as it reflects management's hypothesis about customer needs and how the company can be organized to best meet those needs, generate revenues and make a profit (Teece, 2010). On the other hand, the business model functions as the basis from which the detailed and operational business process model (including the organizations' IT systems) is derived. Figure 1 (adapted from Osterwalder, 2004) serves as a visualisation of our positioning of the business model concept. Simply stated, we view the business model as the translation of a company's strategy into a *'blueprint of the company's logic of earning money'* (Osterwalder, 2004). Here, strategy, business model and business processes address the same problems (e.g. earning sustainable revenues) on different business layers.

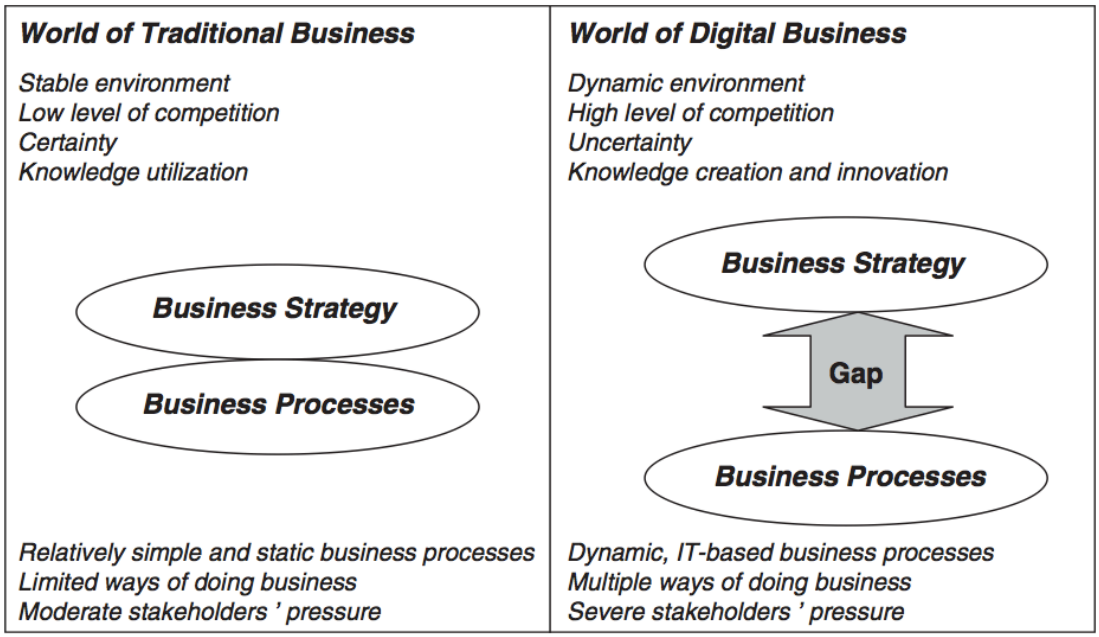
Figure 1: Business layers (Osterwalder, 2004)



As this research focuses itself primarily on the business model as level of analysis in investigating the impact of social media, business strategy and business processes are outside the scope of this research.

According to Al-Debei and Avison (2010), the world of traditional business models has become much more unique and complex and is therefore in need of a better and more explicit framework of the business model. Again, the identified 'gap' in figure 2 represents the business model as an interceding framework between business strategy and business processes. Subsequently, the next section will be focused on adopting a suitable business model framework that will serve this research.

Figure 2: Positioning the business model in traditional and 'new' (i.e. digital) business models (Al-Debei & Avison, 2010)



3.1.2. Ontology and functionality of the business model concept

This section aims to outline the playing field of this research in which the business model serves as the primary context of analysis. This study employs the business model ontology of Osterwalder *et al.* (2005). We build upon Osterwalder *et al.*'s (2005) well-known conceptualisation of the business model. Osterwalder's business model ontology can be captured in four basic areas that together incorporate the nine building blocks and together form the business model ontology (Osterwalder, 2004, p. 42; Osterwalder *et al.,* 2005, p. 18). The four main pillars of an organisation's business model are originally derived from Kaplan and Norton's (1992) Balanced Scorecard and comprise the product, the customer interface, infrastructure management and financial aspects. The product pillar accommodates the value proposition the company offers to specific target customer segments, whereas the customer interface incorporates the description of the companies' target customers, its distribution channels and the type of relationships that are established between the company and its customers (Osterwalder and Pigneur, 2004). On the 'backside' of the business model – as modelled by Osterwalder *et al.* (2005) – the companies' infrastructure management describes the value system configuration (Gordijn, 2002) that needs to be in place to deliver the value proposition from the product and customer interface level (Osterwalder and Pigneur, 2004, p. 4). This value system

configuration consists of the company's activities, key resources and its partner network. Finally, the financial aspects of the business model comprises the organisation's cost structure and its revenue model, which incorporates the variety of ways the company actually captures value *i.e.* makes money. Table 1 outlines the nine building blocks that comprise Osterwalder *et al.*'s (2005) business model ontology.

Table 1: The nine business model building blocks (Osterwalder et al., 2005)

Pillar	Business Model Building Block	Description
Product	Value proposition	Gives an overall view of a company's bundle of products and services.
Customer interface	Target customer	Describes the segments of customers a company wants to offer value to.
	Distribution channel	Describes the various means of the company to get in touch with its customers.
	Relationship	Explains the kind of links a company establishes between itself and its different customer segments.
Infrastructure management	Value configuration	Describes the arrangement of activities and resources.
	Core competency	Outlines the competencies necessary to execute the company's business model.
	Partner network	Portrays the network of cooperative agreements with other companies necessary to efficiently offer and commercialize value.
Financial aspects	Cost structure	Sums up the monetary consequences of the means employed in the business

		model.
	Revenue model	Describes the way a company makes money through a variety of revenue flows.

3.1.3 The role of the customer in the business model

Value creation is a broadly defined concept in business model literature. In essence, business models focus on value creation and customers (Osterwalder *et al.,* 2005, p. 15). Therefore it is important to address the issue of value creation and the role of the customer in the business model. With regard to value creation, we adopt Teece's (2010) viewpoint of a business model as being the articulation of the relationship between creating value for the customer and capturing value for the firm. This implies that deploying activities within the business model framework is ultimately destined to provide customer value accompanied by value capturing by the firm (*i.e.* entice payments and convert payments to profits; Teece, 2010, p. 173).

The role of the customer is a subject of increasing attention in the business model literature. One of the most recent and comprehensive attempts to discuss and theorize the place and role of the customer in the business model comes from by Plé, Lecocq and Angot (2010), whom provide the field of business model literature with a framework for the way in which firms can and should integrate their customers into their business model based on the RCOV (Resources, Competences, Organisation and Value proposition) Model of Demil & Lecocq (2010). The authors argue that most research within business model literature over the last decade has focused on the customer as a mere component of the business model. Sparked and supported by the work of Von Hippel (1998, 2005), Plé *et al.* (2010) acknowledge the role of the customer as an active "content generator" in helping the firm to create value and applies it within the context of the business model. As the rise of the Web 2.0 applications (such as social media) provides firms with new instruments to allow customers to contribute, review and refine content (Constantinides and Fountain, 2008), exploring the role of the customer in the empirical context of business model development and corporate social media usage is most relevant.

Building on their theoretical framework of customer-integrated business models, Plé *et al.* (2010) demonstrate the need to reintegrate the customer into the theoretical

analysis of the business model by arguing that customer participation is increasingly more important for organizations. New or changed business models systematically integrate the customer into the process of value adding. Here, the customer is not only represented as a consumer of products and services but rather directly or indirectly part of the design, manufacturing or delivery process (Ickler, 2010). A customer-integrated business model builds on a tighter coupling between the firm and its customer(s) *i.e.* involves customer to a large extent. As the customer-integrated business model as proposed by Plé *et al.* (2010) is merely a conceptual model, we aim to further explore the customer-integrated business model within the scope of this research. Within the context of this research, it leads us to theorize that certain types of social media usage by companies might lead to changes in the role, and subsequently, the integration of the customer in the business model which has a potential impact on the company's value creation logic and the company's value capturing (*i.e.* the company's business model).

3.1.5 Business model dynamics and business model innovation

As this research is dedicated to explore how business models can develop under the influence of customer interactions on social media, it is a logical step to examine the literature concerning business model dynamics and business model innovation. Specifically, we will focus our efforts on setting the context for business model innovation that is most relevant for this research.

Business models should be seen as dynamic systems that can be changed over time under pressure of external influences such as technological and market dynamics (Morris, Schindehutte and Allen, 2005, Kijl *et al*., 2005). Globalization, deregulation and technological change are just a few drivers of the rapidly changing business landscape. These developments require companies to capture value from new user experiences and new business models (Casadesus-Masanell and Ricart, 2009; Kijl *et al*., 2005). Al-Debei and Avison (2010, p. 364) recognize this notion by stating that organizations need to adapt in order to survive and succeed in a world of increasing environmental complexity. The authors argue that companies can enhance their competitive positions by improving their ability to quickly respond to the environmental turbulence and changes with high quality business decisions. As these external forces put increasing pressure upon the components of an organization's business model, business model innovation is vitally important for organizations and

often impacts the whole enterprise (Chesbrough, 2010; Amit and Zott, 2001). For business model innovation to occur, the core elements of a firm and its business logic should have been *deliberately* changed (Bucherer, Eisert and Gassman, 2012), which holds the assumption of strategic choice. Furthermore, business model innovation requires the 'deliberate change' (Bucherer et al., 2012) of the core elements of the business model, which is subsequently associated with an increase in organizational performance (Teece, 2010, p. 184). In addition, Teece (2010) argues that although technological innovation might be of great importance to society, without the creation of a new business model, the technological innovation might be bereft of reward and value for the 'pioneering enterprise'. The author acknowledges that technological innovation often needs to be matched with business model innovation if the innovator is to capture value. However, small improvements in – for example – a manufacturing process usually don't require business model innovation and allow the company to capture value by cutting costs and expanding market share (Teece, 2010, p. 186). Furthermore, Teece (2010) states that the more radical the technological innovation, and the more challenging the revenue architecture, the greater the changes likely to be required to the firm's traditional business model. Kijl *et al.* (2005) support and nuance this view by stating that business models can either radically or incrementally innovate, dependent on the magnitude of the needed change in the organization's existing resources and capabilities, ultimately resulting in changes in the components of the firm's business model. In the context of this research, implementing social media technologies into the components of the business model could either lead to incremental or radical improvements within the business model (components). Therefore in this research we define business model innovation as the deliberate change of the core components of the firm. As our data does not give information about industry-level performance, we focus on business model innovation at the firm level. It is crucial here that the analysis is focused upon how social media changed the business model in terms of its the impact on the business model components and the role of the customer.

3.2 Social media – point of departure

This section is dedicated to defining, positioning and specifying the social media phenomenon. Hereafter, the identification of several social media functionalities provides us with the prelude to a proposition for identifying and exploring social media business model patterns.

3.2.1 Defining and positioning social media

According to Kaplan and Haenlein (2010), social media can be defined as *'a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content'*. Constantinides and Fountain (2008) add to this definition that *'Social media applications support the creation of informal users' networks facilitating the flow of ideas, information, knowledge and promote innovation and creativity by allowing the efficient generation, dissemination, sharing and editing of content'*. This addition allows us to focus our interests not on the technology that underpins the social media phenomenon itself, but rather on the application and the effects of social media. Many C-suite officials are reluctant or unable to develop strategies and allocate resources to effectively deploy social media (Kietzmann, Hermkens, McCarthy and Silvestre, 2011). As a consequence, firms regularly mismanage or ignore the opportunities and threats presented by, for example, creative consumers (Berthon, Pitt, McCarthy and Kates, 2007).

When viewing these developments, it seems evident that organizations need to carefully examine the strategic options to truly harness the power of social media. As Constantinides (2008) argues in his working paper concerning the strategic opportunities of Web 2.0, trying to build social media strategies on top of shaky, traditional business models is a *'prescription for failure and disappointment'* (p. 4). It is the aim of this research to investigate how the application of social media technology in the business model can lead to new, successful business models that redefine the firm's logic in creating and capturing value for its stakeholders, *i.e.* successfully changed or innovated business models that succeed in creating value (Casadesus-Masanell and Zhu, 2013). To achieve this, it is most relevant to initiate an empirical exploration into the ways that social media can impact an organization's business model. This may result in a holistic view that identifies the usage patterns of social media and the impact of social media on the different pillars and building

blocks of the business model, subsequently leading to the identification and classification of social media patterns that have an impact in the business model (e.g. change, or innovate the business model)

3.2.2. Social media functionality

As stated earlier, this research focuses on the application and use of social media by businesses rather than the technology itself in order to assess the impact social media and resulting changes in interactions between firms and its (potential) customers might have on organisations. In doing this, a functionality-oriented perspective towards social media is occupied, as it is most appropriate here to focus on the characteristics of social media (*i.e.* functionality) than can be of value within an organisations business strategy and business model.

In their work, Kietzmann *et al.* (2011) emphasize the impact social media 'phenomenon' can have on companies, including their reputation, sales and even their survival. As there is a variety of Web 2.0 applications available to the public (Constantinides and Fountain, 2008), Kietzmann *et al.* (2011) argue that by now, marketing and public relation departments have lost their power to the individuals and communities that create, share, and consume blogs, tweets, Facebook entries, movies, pictures, and so forth (Kietzmann *et al.*, 2011, p. 242). In response, we can state that this provides companies with the opportunity to find new ways to engage with and learn from customers and a broad audience of individuals that is present on social media. Following this train of thought, the authors present a framework that comprises seven functional building blocks of social media that allows us to classify specific facets of social media user experiences that can be seen as constructs to make sense of how different levels of social media functionality can be configured (Kietzmann *et al.*, 2011, p. 243).

Figure 3: The honeycomb of social media (Kietzmann et al., 2011)

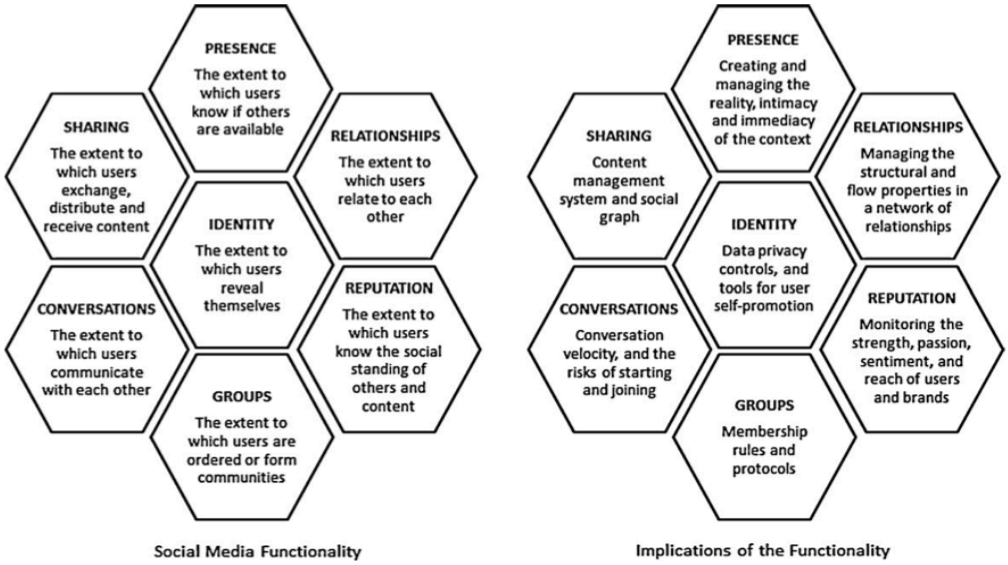


Figure 3 displays the framework, which is introduced as the 'honeycomb of social media'. The honeycomb includes seven functional building blocks as introduced by Kietzmann *et al.* (2011) including the implications these types of social media functionality might have on firms. Table 2 describes the seven functional building blocks in more detail.

Table 2: The seven functional building blocks of social media (Kietzmann et al., 2011)

Building block	Description	Example
Identity	The extent to which users reveal their identities in a social media setting	Social media platforms that are built around identity that require users to set-up profiles
Conversations	The extent to which users communicate with other users in a social media setting	Social media platforms that are designed primarily to facilitate conversations among individuals and groups
Sharing	The extent to which users exchange, distribute and receive content	Social media platforms that consist of people who are connected by a 'shared object' (e.g. a text, video, picture, sound, link etc.)
Presence	The extent to which users can know if other users are accessible	Social media platforms that allow users to display their availability

		and/or location
Relationships	The extent to which users can be related to other users	Social media platforms that have a focus on relationship building. Not only between customer(s) or individuals, but also between the firm and its audience
Reputation	The extent to which users can identify the standing of others, including themselves, in a social media setting. Reputation not only refers to people, but also to content on social media	Social media platforms which provide the opportunity for users to evaluate content, for example by using content voting systems
Groups	The extent to which users can form communities and subcommunities. Groups can either be self-created or not, and vary in their degree of privacy restrictions.	Social media platforms that function as communities by grouping their users in distinct ways

In the context of this research, we will use the honeycomb framework of Kietzmann *et al.* (2011) as the primary instrument to frame the functional use of social media by the studied case companies within the context of their business models. In the next section, the pattern approach is introduced and a social media business model pattern is specified.

3.3 The pattern approach – social media business model patterns

This section is dedicated to integrate the insights from business model and social media literature that were brought up by the author. By using a so-called "pattern approach", the researcher aims to specify a social media business model pattern that succeeds in mapping an organisations social media usage in the context of its business model, resulting in certain effect on value creation for both customers and the firm itself.

3.3.1 The pattern approach

Alexander (1979) first introduced the term 'pattern language' in the architecture domain, referring to a pattern as a *'three-part rule, which expresses a relation between a certain context, a problem and solution'*. Meszaros (1998) describes patterns as having the ability to explain the rationale for using certain solutions and describing the solution, thereby incorporating the *"why"* and *"how"* of a certain solution. Generally formulated, a pattern is a structured method of describing best or good design practices (Schuler, 2008; Rossing, 2012). Following the definition of Rossing (2012), a social media pattern is *'a description of a social media usage process, comprised of context, goal, interaction or interfaces, and in which processes are characterized by context-, goal-, interaction- and interface dimensions'*.

For example, a goal related to social media usage from the focal firm's point of view here might be *co-creation* (*cf.* Hoyer *et al.,* 2010; Von Hippel and Katz, 2002; Von Hippel, 2005), in which the firm is aiming to integrate the customer into the product or service development process (Plé, Lecocq and Angot, 2010; Schaarschmidt and Kilian, 2013) with the goal of understanding and satisfying user's needs and construct better value propositions by using the contributions of customers. An example of an interaction would be the interaction between the focal firm and the contributing customer in the context of co-creation of the value proposition. Subsequently, this interaction can take place on various interfaces, which comprise the aforementioned categories of social media applications by Constantinides and Fountain (2008) such as blogs and SNS (social networking sites) that enable for specific kinds of social media functionalities (Kietzmann *et al.*, 2011).

3.3.2 Social media business model patterns

In the context of this research, we use the pattern approach to identify several distinct types of social media functionality that were used by companies in the context of their business model. This resulted in the specification of a pattern that is able to identify the context, functionality and outcome of social media usage. Here, the context is provided by the organisation's business model and its components as introduced by the business model framework of Osterwalder *et al.* (2005). The functionality of social media usage is incorporated in the honeycomb canvas as proposed by Kietzmann *et al.* (2011), including the (combinations of) seven functionalities of social media in the context of an organisation's business model.

The outcome of applying social media functionality within the business model is defined as 'added value', as we expect to find several patterns in which different social media functionalities provide added value for both customers and the company itself. In the result section, the main components and outcomes of the patterns will be described and examined in more detail.

This results in the following social media business model pattern specification:
Context (business model building block(s)) * Functionality (Social Media) = Added value within the business model

It is important to note that this research is only capable of identifying positive or negative effects and correlations on either customer value or corporate value *i.e.* value cannot be assessed as such. Due to the exploratory nature of the research and the limited involvement of cases (single interviews with key informants), no measurements were done to assess and truly measure customer and corporate value. In this sense, the researcher is only able to identify a positive or negative *direction* regarding the creation of both types of value in the studied cases. Our data does provide strong directions for effects of business model development on value creation. This resulted in values for value creation, which can be classified as values that have a strong and visible connection with the earlier identified business model developments and social media usage functionalities that emerged from the data. In the summary of table 5, we further define, explain and exemplify these specific values of customer and corporate value.
This research is dedicated to the identification and exploration of social media business model patterns by collecting, coding and comparing the qualitative data of all nine cases on social media usage within the empirical context of an organization's business model. The next section will look into the methodological choices that have been made to achieve this.

4. Methods

This section is dedicated to provide the reader with an insight in the methods that have been used to conduct the research and generate results. Not only will it describe the chosen methodology, but also provide the reader with a justification of the specific methodological choices that have been made.

4.1 Research design: multiple-case, qualitative study

According to Edmondson and McManus (2007), theory building research using a single or multiple-case studies can be used to answer research questions that address 'how' and 'why' in unexplored research areas. A case study examines an occurring phenomenon in its real-life context (Yin, 1981) and can be described as a research strategy that focuses on the dynamic present within single settings (Yin, 2003; Eisenhardt, 1989). In choosing between the single-case and multiple-case study method, Dyer and Wilkins (1991) argue that by focusing on different observations in single settings, researchers can focus on developing general constructs instead of focusing on the role of these constructs in particular settings. This would imply an advantage of multi-comparative case studies over single-case studies, as multiple-case studies can observe cause paths and compare different patterns in contrasting circumstances. On the other hand, the single-case study is limited to a single circumstance only and can therefore be too context specific (Eisenhardt and Graebner, 2007, p. 26).

Due to the largely exploratory nature of this this research and the importance of pattern identification among the social media phenomenon in the empirical context of business models, a multiple-case study was conducted. As the identification of relevant patterns for value creation in social media usage in the context of the firm's business model represents the primary research goal, this would justify our choice for a qualitative multiple-case study.

4.2 Case selection and sampling

The selected cases in this research primarily consist of large, incumbent companies. These companies are all being subject to fierce changing market- and technological conditions. Although the selected companies in the sample are coming from a variety of industries, all case companies share the important characteristic of having direct customer contact and becoming increasingly more (forced to be) active on the

Internet and social media platforms in particular. As this would impose pressure upon the case companies' current business model, it seemed worthwhile to explore these companies further in the context of this research. In methodological terms, we chose a non-probability sampling method (Babbie, 2010, p.193), in which the researcher's personal judgment about the appropriateness, usefulness and availability of the cases determined case selection. Furthermore, the cases were selected within the context of the open innovation project 'New Models for the Social Enterprise', which made participating in this research more attractive. By exception we included one start-up company (Kroodle) within the multiple-case study. This decision was made to include an example of an organisation that distinctly uses its activities on social media as an integral instrument within their business model. The sample consisted of companies stemming from several industries in which the immediacy of customer contact is relatively high. Six out of nine companies operate within the (healthcare) insurance sector, whereas the remainder of the cases operates in different industries such as consumer electronics retail, staffing and payrolling and installing residential fiberglass cables. To further illustrate our choice of case companies, an overview of the case company profiles can be found in the case stories of table 3. An extensive and detailed overview of the cases' business models, social media use and the effects on value (within the business model) can be found in appendix B, C and D.

Table 3: Case stories

Name	Customer base	fte	Profile
OHRA	800.000	600	OHRA is a direct seller of a wide array of insurance products and services. OHRA is actively shifting sales to its online channel and structurally collects customer feedback on its website in order to improve its online value proposition. OHRA engages in conversations with (potential) customers on its social media channels to improve their customer services and loyalty.

Unive	1.400.000	2.800	Unive is one of the largest insurance companies in The Netherlands, providing its customers with a wide array of insurance products and services. Unive is expanding its online sales and service environment. The company primarily uses social media for handling customer complaints and inquiries (webcare) and marketing purposes.
Kroodle	> 1.000	10	Kroodle is a start-up company that sells insurance products and services through its easy-to-use (mobile) Facebook app and website. Kroodle develops its insurance products 'mobile first', enabling its customers to purchase insurance products on their smartphones (via their website and Facebook page). Customer must use their Facebook account to share personal data. Kroodle's Facebook community page and its Facebook member-get-member programme aim to acquire more customers and to collect and use customer input and customer feedback on a 24/7 basis.
CZ	3.400.000	2.500	CZ is one of the top three health insurance companies in the Netherlands. The company is expanding its value proposition to its online sales and service channels. The company uses its social media channels for webcare and marketing purposes and therewith aims to set-up and strengthen an online sales funnel towards its website.
VGZ	4.200.000	2.500	VGZ is one of the top three health insurance companies in the Netherlands. The company is increasingly focusing its attention and resources to expanding and improving its online sales and service channels, which must become dominant

			compared to its offline channels. Next to webcare activities, the company regularly starts-up dialogues with customers on social media regarding their products.
ONVZ	400.000	400	ONVZ is a premium health insurance company. The company shifted its entire sales- and service offer to an online environment, using both its website and a mobile service app. Social media is being used primarily to monitor customer sentiment regarding the company and to carry out webcare and marketing activities.
Conrad Electronics NL	-	80	Conrad is one of the largest consumer electronics retail companies in Europe and the largest online retailer in The Netherlands. Conrad became a pure sales and marketing company by phasing out its high-cost offline stores. Conrad's online sales channel is integrated with an online customer review platform to systematically collect customer feedback regarding its products. After internal review of customer opinions and customer feedback, Conrad adapts its product offering.
Reggefiber	500.000	400	Reggefiber is specialized in building and maintaining residential glass fibre cables, which are subsequently rented to service providers. Reggefiber invests in steering its online channels at the cost of its more traditional, offline channels. Although Reggefiber primarily focus on webcare regarding its social media, the company actively involves customers on social media to stimulate end-user demand for a glass fiber connection to residential homes in new building project areas.

Timing	-	450	Timing is among the top five staffing and payrolling companies in The Netherlands, providing its customers with temporary workforce. As a consequence of the economic crises, Timing strengthened its focus on its B2B customers instead of the hiring of temporary workers. On social media, Timing regularly monitors activity and sentiment related to its company.

As both the business model concept and the concept of social media are relatively broad defined within their respective literature fields, we adopted two existing frameworks in the form of Osterwalder *et al.*'s (2005) business model framework and Kietzmann *et al.*'s (2011) honeycomb framework that includes the seven functional building blocks of social media. For establishing a first perspective on the business models of all nine case companies, we used Osterwalder and Pigneur's (2009) Business Model Canvas, which is a commonly used method for designing, communicating and understanding business models. The business model canvas was used as a vehicle to map out the case companies' business models, the honeycomb of social media was used to identify social media functionality being used by the case companies.

4.3 Data collection and analysis: the coding procedure

In this multiple-case research, qualitative data will serve as the primary source of data. Key informants will have an essential role in representing the interviewees that will provide the researcher with his primary source of data. A semi-structured interview (content is included in appendix A) with open-ended questions was carried out to obtain data related to specific research subjects, such as social media functionality and business model components. The interviews were complemented with further company information (*i.e.* annual reports as well as social media homepages, websites, and other publications such as company presentations) for triangulation to increase the level of consistency. Interview recordings and transcripts including field memos, notes and complementary case information are

available on personal request. A total of nine interviews were conducted with an average duration of 60 minutes. This number of interviews proved to be sufficient to increase the generalizability of the results and to prevent complexity of the data. Interviews were held with key informants within the company that were able to provide the researcher with relevant information concerning the organisation's business model and social media usage functionalities. Examples of respondents include a customer service manager, an e-marketing executive, a CIO, a manager Online Services and a co-founder.

In analysing data, the researcher is in risk of getting caught between analysing unique and context specific single sites and analysing the similarities across multiple sites (Yin, 1981). Eisenhardt (2007) suggests several tactics to cope with this issue. For this research, it is most important to avoid the aforementioned risk in data-analysis by Yin (1981) by organizing data in categories to analyse within-group similarities. As such, the multiple-case study deployed in this study is expected to result in conclusions comprising novel, testable and empirically valid theory, which arises from the close linkage with empirical evidence.

Results were generated by applying several coding techniques on the interview transcripts as proposed by Strauss & Corbin (1998). Transcripts were read, re-read and broken down in to several 'themes' through the coding process. The coding process took place in three phases: (1) open coding, in which interview transcripts were coded and concepts were identified and their properties and dimensions were discovered in the data; (2) axial coding, in which the identified categories in the open coding process were linked to their properties and dimensions (*e.g.* by using memo's as a running log of analytic sessions; Strauss and Corbin, 1998, p. 153, 217); (3) Selective coding, in which theoretical saturation of the data was reached and the process of integrating and refining the theory took place. During the coding procedure, microanalysis formed the basis of our qualitative analysis. This included a line-by-line analysis in which we classified emergent categories that – along with their relationships – functioned as the foundations for our developed theory and the identified social media business model patterns. Furthermore, the researcher made use of field notes and used techniques such as theoretical memoing (Strauss and Corbin, 1998, p.153; Babbie, 2007, p. 405). Ultimately, the results were summarized in tables to increase the susceptibility of the findings.

In the following section, the results of the research will be presented, after which the results will be discussed in the light of their theoretical implications concerning business model development and value creation in the context of social media usage.

4.4 Constructing the patterns

In studying the case companies' business model development and the organisation's techniques to interact and engage with their customers, several patterns of social media usage functionality emerged. As introduced before in our theoretical framework, our pattern specification was defined as follows:

Context (business model building block(s)) * Functionality (Social Media) = Added value within the business model

In the discovery of the patterns, each identified business model building block and social media functionality was assigned a specific code comprising either "BMB+number" and/or "SF+number". This method made it easier to place social media functionality within the business model and to compare the cases. However, the creation and assembly of the patterns did not take mathematical forms. We related each business model building block (BMB) to one or more uses of social media functionality (SF) and its results concerning the added value (AV) of the patterns within the business model according to the data that was collected at the participating companies. This led to the identification of three core patterns in which the firm's social media usage does have a different impact on customers and therefore on the business model itself: (1) *Customer-facing* pattern; (2) *Customer-valuing* pattern; (3) *Customer-integrating* pattern.

From the analysis, several relevant developments within the case companies business model building blocks were identified and mapped on the business model canvas during several sessions. For example, the majority of the case companies are actively working on the improvement of their customer relationships by improving the customer experience through adding and improving new online services. Concerning social media usage functionality, we used the seven functional blocks of Kietzmann *et al.*'s (2011) work to identify distinct uses of social media by the case companies from the interview data.

5. Results

5.1 Customer interaction and customer participation

The results strongly point to a common denominator among the cases that sets the participating companies apart from each other: the role of customers. Although every single company respondent emphasized the important role of their customers for their company, the actual role of customers within the case companies' business models differed significantly among cases. Furthermore, we found that companies' social media usage in terms of its functionality can be used as an indicator for ways in which the companies interact with customers. Based on our findings, we introduce *customer interaction* and *customer participation* as two variables that are influenced by the companies' social media usage and have distinct impact on the added value that is created within the business model. After introducing and exemplifying these two variables, we will integrate them into the three identified themes.

First, we define customer interaction as *"interaction between the firm and its (potential) customers"*. On social media, customer interaction can take place between the firm and its social media audience, which might incorporate customers and potential customers. Although all case companies were selected on the basis of their direct customer contact, we found that the interaction these companies have with their customers may vary in terms of (1) the *initiation of the interaction* and (2) the *degree to which the interaction between the firm and the customer is organised and structured*. According to our findings, our cases showed customer interaction on three levels, regardless of the social media interfaces that were used. The first level of customer interaction is where the interaction between the firm and customers is initiated by the customer. For example, at Unive there is a dedicated webcare team that is focused on handling all complaints and inquiries coming from customers.

The second level of customer interaction is where the firm is responsible for initiating the interaction. At OHRA, the company is more focused at initiating conversations with customers on its social media channels.

"To understand our customers better, we simply start conversations with them"

- OHRA's Service Manager

The third and highest level of customer interaction is where the interaction is initiated and *structured* by the firm, which allows for customer feedback and customer input to be disseminated within the organisation. An example of this level of customer interaction can be observed at Conrad Electronics, where the company actively motivates and stimulates customers to review their products online, after which the company uses the feedback to adapt its product offering.

To frame customer interaction within the context of business models and the added value the interaction might result in, we have identified *customer participation* as "*the extent to which customers are involved in the components of the business model*", the latter being represented by Osterwalder *et al.*'s (2005) earlier introduced business model pillars *value proposition*, *customer interface*, *infrastructure management* and *financial aspects*. We have observed that customers can be involved on three different levels within a business model, depending on the degree of customer interaction. Before illustrating this with empirical evidence, we will shortly characterize these three levels. By nature, customers are already included in the *customer interface* in Osterwalder *et al.*'s (2005) business model ontology, which represents the lowest category of customer participation. Second, customers can also become involved in the companies *infrastructure management*, as companies start to structurally collect customer input and customer feedback. In this sense, customers are "upgraded" to a level where they're not only the addressee of the companies' value proposition, but are actually more involved in sharing their opinion regarding the companies' service and products. This represents the center category of customer participation. Third, we found that customer participation can vary to an even higher level. Here, customers are not only involved in sharing their input and feedback on a daily basis, but this process of collecting customer input and customer feedback is embedded as one of the primary influences on the companies' *value proposition*. For example, Kroodle uses its Facebook application not only to offer service to its customers, but also to gain customer data and to collect customer input and feedback by actively questioning and motivating its audience on social media. To achieve this, the company organises contests to collect input regarding the development of new products and uses a member-get-member programmes to bring in new customers. As this research is only capable of identifying positive or negative effects of customer interaction and customer participation through social media usage functionality on

the added value within the business model, value cannot be assessed quantitatively. This explains the absence of customer participation within the *financial aspects* pillar (cost structure and revenue model).

As a consequence, the levels of customer interaction and customer participation can be grouped into three categories, ranging from low to high. Table 5 further specifies these categories. In the following three sections, the concepts of customer interaction and customer participation are integrated into the other central themes of this research, which integrate all results. These sections include more examples stemming from the data to better illustrate and back-up the findings of this research.

Table 4: Customer interaction and customer participation within the business model

Level	Customer interaction	Customer participation
Low	Interaction initiated by the customer	The customer is - by nature of the business model ontology - involved in the *customer interface*
Medium	Interaction initiated and structured by the company	The customer is also involved in the companies' *infrastructure management*
High	Interaction initiated, structured and absorbed by the company	Customer input and customer feedback leads to better targeted *value propositions*, which is the third pillar the customer becomes involved in

By having introduced customer interaction and customer participation, this provides us with enough grip on our data to analyse and structure the results in terms of three business model patterns in which customer interaction and customer participation varies depending on the variety and extensiveness of social media functionalities that are being used to add value within the business model. The themes are represented by the patterns, including (1) customer-facing business models; (2) customer-

valuing business models and (3) customer-integrating business models. As our data show that customer interaction and customer participation are increasing from one pattern to another, we named these business model patterns 'customer-facing' (responding to customers' inquiries), 'customer-valuing' (collecting and valuing the customer's feedback and input) and 'customer-integrating' (customers as an integral part of the business model). In the following sections, these findings will be introduced and examined in more detail based on our data. Furthermore, the themes provide us with the basis for our discussion and conclusion in chapters six and seven.

5.2 The customer-facing business model

In the customer-facing pattern, customer interaction and customer participation is at a relatively low level *i.e.* the involvement of customers is limited to a single business model pillar represented by the customer interface. Here, customer interaction is predominantly initiated by the customer himself. The companies that fall within this pattern category as a result of our data-analysis consist of Unive, Timing and Reggefiber. Typically, the role of customers of these firms is mostly limited to being the target of the value proposition and the source of revenue streams.

"The more end-user subscriptions we sell, the higher our revenues"

- Reggefiber's marketing executive

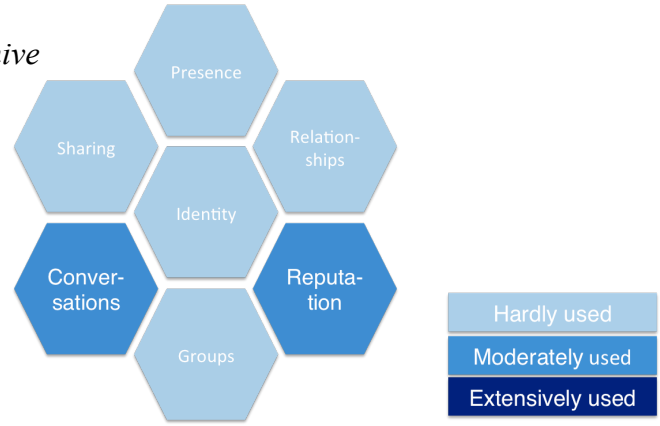
For example, Unive is expanding and improving its online sales and service channels in order to target new customer segments with an improved value proposition. To achieve this, the company has started to map out 'customer journeys', which entails researching customer (buying) behaviour to provide them with better value propositions. Another characteristic of the customer-facing business model pattern is that companies within this category mostly focus on customer satisfaction. This does again affirm our observations that within this pattern, customers are merely seen as a consumer of the companies' output *i.e.* value proposition. Regarding social media functionality, we observe that these 'customer-facing' firms primarily make use of social media to interact with customers in the context of their complaints and questions. Furthermore, the companies regularly monitor activity and sentiment on social media related to their companies' reputation. Notable here is that the majority of interactions with customers start after the customer has initiated a conversation,

which brings us to the observation that customer-facing businesses leave the initiative for customer-firm interaction mostly at the customer side. For example, these companies' main activity on their social media channels is responding to customer inquiries and maintaining conversations regarding their marketing campaigns. In this sense, Unive, Reggefiber and Timing primarily make use of the *conversation* and *reputation* functionality of social media, reflected in using their social media channels primarily for webcare and marketing purposes. Figure 4 gives us a visualisation of the functionalities of social media that are being used within customer-facing business models.

Figure 5: Customer-facing social media functionality

Case companies:

Timing, Reggefiber and Unive



"We view social media as an extension of our customer service"

- *Unive's* Customer Experience and Demand Manager

"We measure activity and sentiment on Facebook on a daily basis"

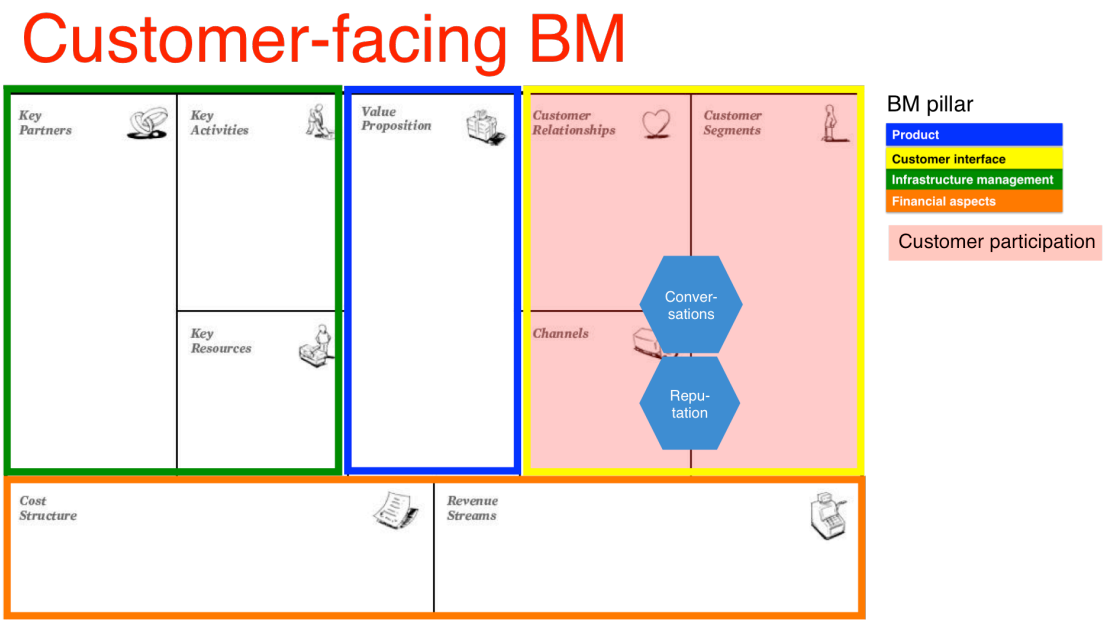
- Timing's E-Marketing Executive

As we can observe within this pattern, customer interaction and therefore the involvement of customers in the business model is relatively low, thus we observe a low level of customer participation. Nonetheless, customers are provided with the opportunity to share their thoughts about the company's products and services and receive feedback from the company in return. In this sense, the social media functionalities *conversations* and *reputation* add value for the customer in the sales and service experience they get from the company.

Figure 6 provides us with a visual of the *customer-facing* business model pattern. In terms of customer participation within the business model, we only observe the

customer being a target of the value proposition. Furthermore, we observe the use of conversations and reputation functionality of social media, which improves the customer experience through easy and increased customer interaction and therewith creates value within the business model for both the company and customers. The labelled arrows that are (increasingly) used within these visualisations of the emerged business model patterns indicate the relationship between the components of the business model in terms of customer interaction and customer participation, which add value within the business model supported or enabled by interactions on social media. For further clarification, each relationship is explained in the added table (table 8) at the end of this chapter by referring to the label numbers (1-7). Furthermore, at the closing paragraph of this chapter, we wrap-up the patterns by comparing them on the basis of customer interaction, customer participation, social media functionality and added value within the business model.

Figure 6: The customer-facing business model



5.3 The customer-valuing business model

In the customer-valuing pattern, customer interaction and customer participation is already at a higher level than it is in the *customer-facing* pattern. Here, a medium-level of customer interaction and customer participation involves the customer in two business model pillars comprising the companies' *customer interface* and *infrastructure management*. The companies that fall within this pattern category as a

result of our data-analysis consist of OHRA, ONVZ, VGZ and CZ. Typically, these companies not only invested heavily in their online sales and service environments to improve their value proposition for their targeted customer segments, but also structurally collect customer input and customer feedback in order to shape and reshape their value propositions. Here, 'structurally' means that the organisations has mechanisms in place to collect customer feedback and customer input on a periodical basis. For example, VGZ's customer service centre incorporates a social media team that exclusively collects customer data from social media interfaces on a daily basis. These "customer-valuing" companies are considered to be more in charge of their interactions with customers compared to the earlier introduced "customer-facing" companies, as they are the initiator of most customer contact that takes place.

"Our online advice panel, our customer service centre and our customer arena all help us to gain feedback on our products and services from customers"

- ONVZ's Chief Information Officer

This involves customers in sharing their thoughts and opinions about the products they currently consume or will consume in the future. However, although *customer-valuing* companies do value their customer's involvement in the form of customer input or customer feedback, the actual processing of the received customer information from the external to the internal organisation is not optimal. The dissemination of the collected customer input and feedback from the outside within the internal organisation is sometimes problematic for these companies. A typical illustration of this can be found at CZ. At this company, customer input and customer feedback is structured and organised, but not logged, shared and evaluated on a regular basis between the Internet department and the customer contact centre, other departments and vice versa.

"We do not cooperate with our customer contact centre on a daily basis yet. This is a shame, because they are the ones that hear every little thing our customers tell us"

- CZ's Manager Online

As is the case for the companies that fall within the customer-valuing pattern, customer information (comprising customer input and customer feedback) is collected

primarily within the customer contact department. However, the coupling between these departments and, for example the new product development department or the Internet department is very loose and unstable.
As customer input and customer feedback is mostly collected and valued within the communications or marketing department, sharing new customer insights within the internal organisation *i.e.* with other departments (such as marketing and product innovation) is sometimes problematic within these companies due to the arrangement of their (mostly large and bulky) internal organisations.

"The observation and logging of customer behaviour, customer input and customer feedback is organised in multiple places within our company"

- CZ's Manager Online

At OHRA, the marketing unit is separately organised within every single business unit. OHRA's customer interaction channels (the Internet department and its customer service center) are not directly connected to the marketing departments, which makes it less efficient and logical to share valuable customer input and customer feedback to (re)shape the company's value propositions.

"We are increasingly facilitating our customers in providing us with feedback on our website and on our social media channels"

- OHRA's Service Manager

"We have some customer advice panels, but mainly use them to test our marketing campaigns. We lose a lot of actual customer input and customer feedback because of the distance between our customer contact centre and our other departments"

- VGZ's Channel Manager

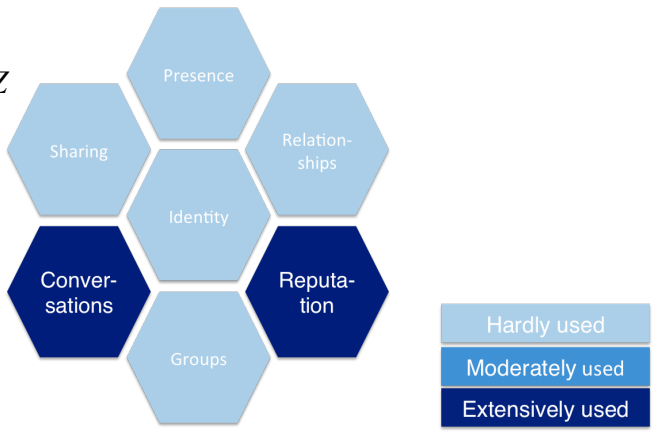
At VGZ, being a large organisation with dominant offline customer contact, a lot of customer input and customer feedback is lost. Although important customer input is aggregated in customer service centres, there is still a lot of customer input and customer feedback that is not disseminated within the internal organization because of the fact that the organisation is still structured in "silo's", e.g. there are separate departments in place for new product development, commerce and customer contact

that operate relatively isolated from each other. At ONVZ, communication among departments is designed to be more effective than at CZ and OHRA, as customer input and customer feedback is shared through all departments in small, multi-disciplinary teams.

Strikingly, the companies that follow a customer-valuing pattern are not set apart from the customer-facing companies on the basis of their social media usage in terms of the *types* of functionality they're using, but rather in the *extent* to which they're using social media functionality. Although the *customer-valuing* companies do involve customers in more than one pillar of their business models, all three companies primarily use the *conversation* and *reputation* functionality of social media. Without exceptions, all three companies use their social media channels primarily for webcare, conversations with customers and as a monitoring mechanism for relevant activity, customer sentiment and, ultimately, their (online) reputation. However, compared to the companies in the *customer-facing* pattern, the conversations these companies have with their customers are much more intentional, planned, structured, regulated and recorded. In addition, the dialogues that are started between the firm and it's (potential) customers on social media, are much more intentionally oriented towards gathering feedback or valuable information from customers in the form of ideas, suggestions regarding many subjects including ideas for new products and suggestions for service improvements. Figure 7 gives us a visualisation of the functionalities of social media that are being used within customer-valuing business models.

Figure 7: Customer-valuing social media functionality

Case companies:
OHRA, VGZ, ONVZ and CZ



"We only used to talk to customers when they were unhappy or in trouble. Now we stimulate our customers to share their ideas about our company. This allows us to have more meaningful conversations with them"

- OHRA's Service Manager

"We have community managers whom focus on starting and maintaining specific customer dialogues on social media regarding our healthcare insurance labels"

- VGZ's Channel Manager

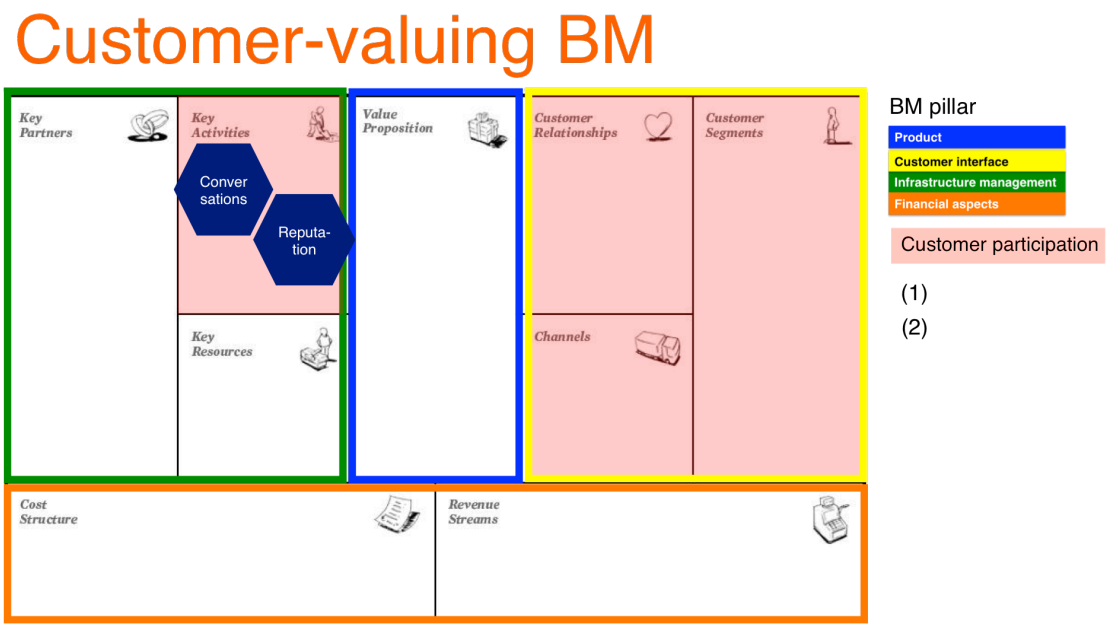
At OHRA, dialogues with customers are started and held on a regular basis regarding a wide array of predetermined subjects surrounding the company's value proposition(s). At VGZ, interaction and conversations with customers are increasingly more focused and pre-designed to collect relevant information and feedback from customers.

"Using social media for webcare purposes should be a precondition for every company. What we're really interested and investing in is grasping customer sentiments regarding our company and translating this into new solutions.

- CZ's Manager Online

At CZ, social media is still primarily functioning as webcare channel in order to decrease the pressure that's put upon its call centre (service desk). However, the organisation is increasingly more interested in and investing in grasping the sentiment of their (potential) customers regarding the company's value propositions. Figure 8 provides us with a visual of the *customer-valuing* business model pattern.

Figure 8: The customer-valuing business model

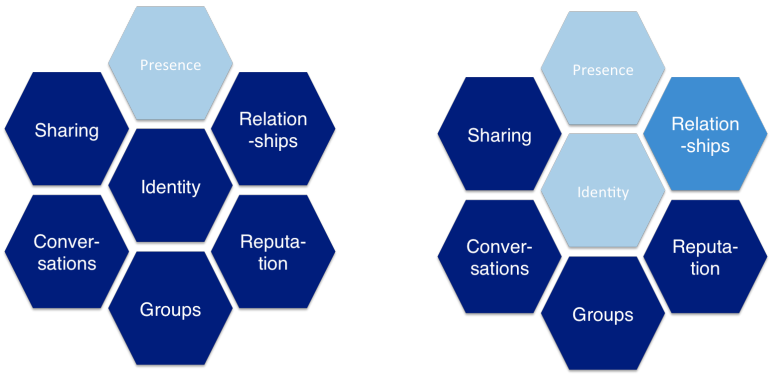


5.4 The customer-integrating business model

In the customer-integrating pattern, customer interaction and customer participation are at the highest level when compared to the other identified patterns that emerged from the data. In this pattern, customer interaction is initiated and facilitated by the company to maximize customer input and customer feedback. In addition, within this pattern we did not only observe interaction between the firm and its customers, but also interactions among customers that are closely monitored by the firm itself. Conrad created an integrated online review platform for its customers, whereas Kroodle uses a (mobile) Facebook application to serve its customers and acquire new customers. Here, the involvement of customers is visible within three business model pillars including the *customer interface, infrastructure management* and the *value proposition*. As a result, customer interaction does have a relatively high impact on the business model of Kroodle and Conrad Electronics NL, which represent the companies that fell within this pattern category as a result of our data-analysis. In addition, a wider variety of social media functionality is being used to a greater extent compared to the companies that are grouped within the other patterns. Both Conrad and Kroodle allow their customers to become more involved in their value propositions by making the collection of customer input and customer feedback a daily key activity, after which relevant information is disseminated within the internal organisation and subsequently translated in new or adapted value propositions. In this

sense, customers of Kroodle and Conrad are not merely a target of the firm's value propositions, but are being used as a resource of their own in order to achieve better (or better targeted) value propositions. Our data further indicated that the two companies that fell within the *customer-integrating* pattern were deploying a *wider variety* of social media functionality on their social media platforms to a *greater extent* compared to the companies that have been positioned in the other two patterns. Regarding the social media functionalities that are being used within the *customer-integrated* pattern, we observe that next to extensive use of the *reputation* and *conversation*, both Kroodle and Conrad use the *group* and *sharing* functionality of social media to elicit the collective intelligence of their customers and social media audience in general. Whereas Kroodle uses a Facebook application to activate its customer community and make it easier for its customers to use the companies' services, Conrad makes use of its own review platform to create a community of customers that are willing to provide the organisation and other potential buyers with their opinions on the product(s) they bought. Figure 9 gives us a visualisation of the functionalities of social media that are being used within customer-valuing business models.

Figure 9: Customer-integrating social media functionality



Kroodle *Conrad*

"Everyone uses the Internet and the help of friends and family in buying new products. By making Facebook our primary sales and service channel, we make our products and services easy to use for our customers.

- Kroodle's Co-Founder & CEO

At Kroodle, customers are involved in testing and sharing ideas regarding the company's sales channels and its products, comprising Facebook and the company's website. To achieve this, the company regularly starts new campaigns on Facebook that stimulate customers to join the company in sharing ideas and suggestions. Subsequently, customer input and customer feedback is taken into account in building new insurance products and in building new functionality within the company's sales and service channels. Furthermore, Kroodle stimulates its customers to come up with new ideas regarding new products. Using their Facebook wall and providing customers with a Facebook login into Kroodle's website, Kroodle creates a familiar user interface for their customers to communicate with the company and share their ideas. Furthermore, Kroodle distinguishes itself from the other companies that were part of this research by deploying the *identity* functionality of social media as introduced by Kietzmann *et al.* (2011). Herein, Kroodle uses its customers' Facebook profiles *i.e.* identity. Getting customers to use 'social login' with their Facebook ID's makes it more easy for Kroodle to discover their customers' identities and pre-fill customer data within their back office systems to help determine the monthly premiums that customers have to pay to cover their insurances, which are based on demographics like age, address and residence.

"Without a Facebook account, you cannot become our customer"

– Kroodle's Co-Founder and CEO

On the one hand, this helps the company in providing its customers with suitable insurance products and (self-) service and on the other hand, it helps Kroodle to easily collect relevant customer data. This highly accessible way of communication lowers the barriers for Kroodle's customers and audience to buy products, share and express ideas or to make service inquiries on its Facebook wall, which are handled by a 24/7 available team.

"The full integration of our products and services with Facebook makes it easy to take advantage of the collective thinking power of our customers, 24/7"

"After much customer input, we came up with a travel insurance that can be turned off or turned daily"

- Kroodle's Co-Founder & CEO

This enables customer's to become part of the company's key activities on a daily basis and share their feedback and ideas with the company. As a consequence, this process would make customers a resource of their own within Kroodle's business model (infrastructure management pillar) to determine new and/or better (targeted) value propositions. In addition, Kroodle has built in more social media functionality within their business model, comprising *sharing* functionality of social media. Kroodle's social member-get-member programme stimulates its existing customers to share Kroodle's Facebook page and bring in new customers by providing them with financial rewards for each new customer that joins Kroodle via Facebook. Kroodle gives its customers the opportunity to invite their Facebook friends to become a customer of Kroodle. In return, both customers and their friends get a financial bonus. This technique is aimed at bringing in more revenues by adding new revenue streams through the member-get-member programme. At Conrad, the *sharing* functionality of social media is also used, as Conrad's review platform connects customers on the basis of the product(s) they've bought and reviewed.

"A genuine opinion from a genuine customer is perfect!"

– Conrad's Marketing & Communication's Manager

This allows customers to share their experiences, opinions and suggestions regarding Conrad's product offers. As of February 2014, over 128.000 product reviews from customers are integrated in Conrad's website[1], starting in June 2009. In comparing Kroodle's and Conrad's *sharing* functionality, both companies use incentive mechanisms to activate customers to share their opinions with their friends or other customers and get a financial reward (Kroodle) or help other customers out and provide each other with correct and fair product information and feedback (Conrad).

[1] Source: www.conrad.nl/ce/nl/content/uw_mening_telt/uwmeningtelt

"Thousands of online reviews every week provide us with a firm grip on the quality and customer value of our current and future products"

– Conrad's Marketing & Communication's Manager

Over the last three years, Conrad took social commerce to the next level. Tasks concerning its review platform, its blog and its social media channels in general were divided within the communication department, which caused customer communications and the collection of customer feedback and customer input to improve significantly. Together with its in-house developed review system, the organisation has created his very own, effective dialogue with a large, dedicated group of customers that are willing to provide the organisation with their feedback and ideas. As customers receive an e-mail message within three days after they received their products, they are stimulated to review the products they bought and share their opinions with other customers.

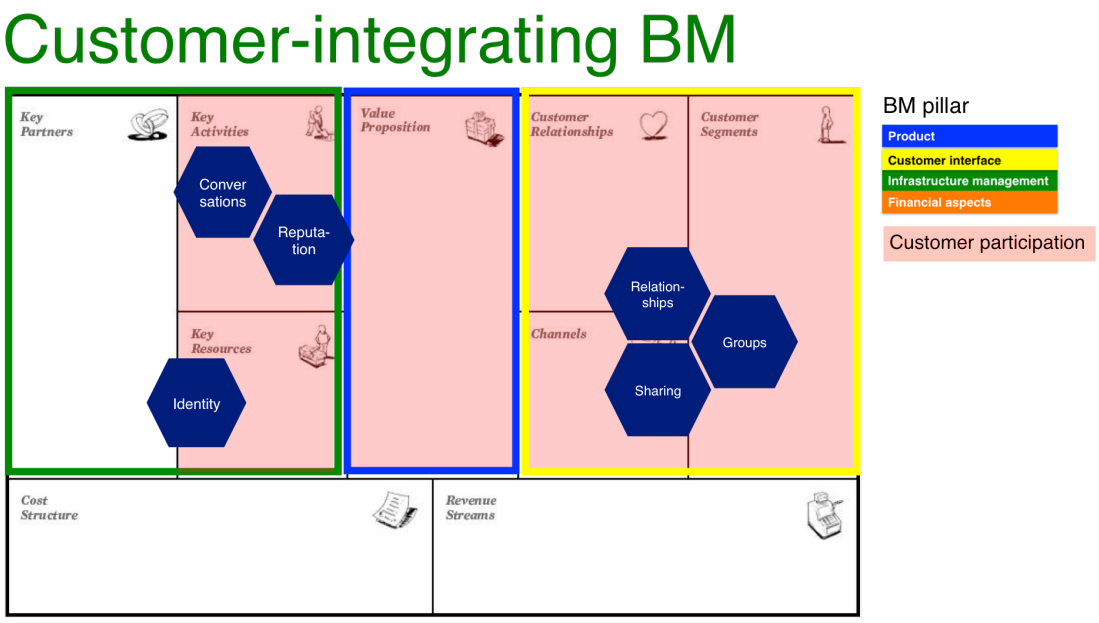
"After buying a product at Conrad, you'll get an e-mail in which we thank you for your purchase and invite you to share your opinion and ideas on the product in the form of a review on our platform"

- Conrad's Marketing & Communication's Manager

In the *customer-integrated* pattern, the internal organisation of firms is more open compared to the internal organisations of the firms that fall within the other two pattern groups. On a daily basis, Conrad's product managers meet to discuss the latest customer input and customer feedback (reviews). Subsequently, every product manager collects and logs the most important information from customers and adapts it to specific products if necessary. In some cases this only involves minor changes such as changes in product information. However, customers can also influence products in such a way that they make products change, cause products to be deleted from the website or that new products are introduced as a result of (special) requests. For Kroodle - having a team standby on a 24/7 basis to collect all relevant data stemming from customers (opinions, ideas, suggestions, complaints) - the collection and coordination of customer input and customer feedback is a key activity. As Kroodle's organisation is still small in terms of fte, sharing customer insights and translating them into new or adapted products is not problematic. Nonetheless,

Kroodle's Facebook applications allows for notifications and efficient data-analysis of customer input and feedback. Figure 10 provides us with a visual of the *customer-integrated* business model pattern. The red areas indicate the places within the business model in which customer participation takes place.

Figure 10: The customer-integrated business model



5.5 Pattern wrap-up

In this research we observed three patterns, comprising the *customer-facing* business model, the *customer-valuing* business model and the *customer-integrating* business model. For each pattern, the extent to which customers interact with the pillars and components of the business model and the extent to which social media functionality is being used is increasing. In the *customer-facing* business model, customer interaction is initiated by customers and are a mere target of the company's value proposition. Here social media is being used to a moderate extent at the *customer interface* pillar of the business model, using the *conversation* and *reputation* functionalities to 'face' customer's complaints and measure customer satisfaction. In the *customer-valuing* business model, the company initiates customer interaction but customers are still not structurally involved in creating or (re-) shaping the value proposition, resulting in medium customer participation. However, customer input and customer feedback is collected on a structural basis and is therefore a key activity in this type of business model. To achieve this, *customer-valuing* companies make

extensive use of the *conversation* and *reputation* functionality of social media to collect and log customer input and customer feedback. Hereby, the customer's initial involvement at the customer interface in the business model is extended to the infrastructure management pillar in the key activities component. In the *customer-integrating* business model, companies do not only structurally collect customer input and customer feedback, rather these companies make use of the collected customer input and customer feedback as a resource for new or adapted value propositions. This process is *embedded* within the internal organization and therefore a key resource within the business model. Furthermore, this might lead to better-targeted, new or adapted value propositions (as illustrated in table 5). Furthermore, the acquisition of new customers and the addition of new revenue streams also lead to increasing revenues. To achieve this, social media is being extensively used (as illustrated in section 5.5), making extensive use of the *reputation* and *conversation* functionalities as a key activity, using the *identity* functionality as a key resource and primarily using the *groups* and *sharing* functionalities at the customer interface to stimulate customer participation in other parts of the business model and add revenue streams. This brings us to the observation that in the *customer-integrating* business model, social media is being used to a larger extent and in a higher variety compared to the other two patterns. Here, the role of the customer stretches out to all business model pillars with exception of the financial aspects, of which the effects could not be measured within this research. Table 5.5 summarizes the results in an overview.

Table 5: Pattern comparison

Pattern	Customer interaction	Customer participation	Social media functionality	Added value within the BM (accumulating)
Customer-facing	Initiated by the customer	At the customer interface	Moderate conversation and reputation functionality	Improved customer experience
Customer-valuing	Initiated by the company	At the customer interface and infrastructure management	Extensive conversation and reputation functionality	Increasing dialogue/interaction between the firm and its customer segments to improve customer loyalty; Improved learning at both individual (employee) and collective (firm) level through collection of customer input and customer feedback
Customer-integrating	Initiated and structured by the company	At the customer interface, infrastructure management, and value proposition	Extensive conversation and reputation, extensive groups, sharing and identity functionality	Acquisition of new customers through better (targeted) value proposition(s)

6. Discussion

A relatively large body of research addresses the importance of well-developed, customer-oriented business models and business model innovation as being essential to a firm's strategic position and profitability (*cf.* Amit and Zott, 2010). However, the field of business model literature increasingly focuses its efforts on investigating *how* to achieve the desired change in business models under the influence of environmental turbulence. In this sense the research is closely related research to (among others) Achtenhagen, Melin and Naldi (2013), Chesbrough, (2010) and Teece, (2010). In line with Wirtz *et al.*'s (2010) research proposition that Web 2.0 trends and characteristics are *changing the rules of the 'create and capture value game'*, our research builds upon this proposition by setting-out to explore the added value of social media functionality within business models. We explored the impact of social media usage on the different pillars and components of the business models of several companies operating in different sectors. To achieve this, we mobilized both a wide array of business model literature and specific literature related to social media and Web 2.0 developments to identify the most relevant and suitable theoretical frameworks that where used this research. Herein, we found good use in applying the frameworks of Kietzmann *et al.* (2011) regarding social media functionality in the business domain and Osterwalder *et al.*'s (2005) business model ontology. Not only did we found several ways in which companies can apply the different functionalities of social media to interact with customers, but we also provided insight in the added value of these social media functionalities within the business model through customer interaction and customer participation.

This study encompasses four key findings. First, we found that applying the framework of Kietzmann *et al.*'s (2011) social media functionalities can be a useful indicator of customer interaction and customer participation within business models. Herein, social media provides firms with different functionalities to communicate and interact with customers within the four business model pillars as defined by Osterwalder *et al.* (2005). Second, we found that social media functionality can be used on three levels within a business model depending upon the variety and the extensity of the applied social media functionality. The levels comprise: (1) moderate *conversations* and *reputation* functionality at the *customer interface*; (2) extensive *conversations* and *reputation* functionality at both the companies' *customer interface* and *infrastructure management*; (3) and extensive *sharing*, *groups* and *identity*

functionality at the *customer interface*, *infrastructure management* and *value proposition*. Third, we found that the role of the customer can vary to three different extents within business models according to the degree to which customers interact with the different pillars and components of the business model: (1) Customers as a mere target of the value proposition by nature of the business model ontology *i.e.* involvement at the customer interface pillar; (2) Customers as an additional resource to collect input and feedback next to other methods such as market research and customer behaviour and satisfaction monitoring *i.e.* involvement at both the customer interface and infrastructure management pillars; (3) Customers as a resource to generate better (targeted) value proposition(s) to increase or add revenues and decrease costs *i.e.* involvement in the value proposition pillar business model pillars as characterized by Osterwalder *et al.* (2005). Fourth, we classified and characterized three business model patterns in which customer interaction and customer participation varies depending on the variety and extensiveness of social media functionalities that are being used to add value in several places within the business model. These patterns comprise: (1) the *customer-facing* business model; (2) the *customer-valuing* business model and (3) the *customer-integrating* business model. As a result, this study makes a number of theoretical contributions. Although social media is widely used tool in many industries, it has scarcely been studied in the context of business models. Our social media approach towards business models provided us with the emerging opportunity to study customer participation in the empirical context of business models. Customer participation is a widely discussed subject in other literature streams such as product innovation literature and service marketing literature (Mustak *et al.*, 2013; Plé, 2013). Whereas authors such as Von Hippel (1988, 2005), Hoyer *et al.* (2010), Stock (2014) and Smets, Langerak and Rijsdijk (2013) focus on customer participation in the specific context of new product development, other authors such as Moeller, Ciuchita and Mahr (2013), Ho & Ganesan (2013) and Ngo and O'Cass (2013) tend to focus purely on studying the service (marketing) side of customer participation and the effects that customer participation might have on firm capabilities and firm performance. In contrast, this research aimed to deploy a more comprehensive perspective upon customer participation and build upon the other theoretical perspectives by studying the role of customers in the context of business models and corporate social media use. Although respected authors in the business model literature such as Al-Debei and Avison

(2010) and Osterwalder *et al.* (2005) include customers in their business model framework and business model ontology, customers are primarily typified as mere constituents of a business model, functioning as the addressee of a value proposition and the source of revenues. In this thesis we did not only consider the customer as a target of a companies' value proposition. In addition, we empirically investigated the role of the customer as an active content generator within a business model, constantly providing the organisation with input and feedback that in turn is used to come up with better and better-targeted value propositions. Based on our data, this led us to define customer participation as the extent to which customers interact with the components of the business model. Herewith, we build upon the closely related work of Plé, Lecocq and Angot (2010), who provided us with a theoretical framework of a fully customer-integrated business model (CIBM). Whereas Plé *et al.* (2010) provide the field with a detailed theoretical conceptualization of a full customer-integrated business model and its internal relationships between the components of a business model (in this case, the RCOV model of Demil and Lecocq, 2010), our empirical data allowed us to identify and explore three levels of business models in which the degree of customer participation varies depending on the degree of interaction between customers and the components of the business model as characterized in Osterwalder *et al.*'s (2005) business model ontology. Notably, we found that companies exhibiting the highest degree of customer participation within their business models were also using social media functionality to the highest extent and variety. Thus, these companies were also providing the 'outside world' (in this case, customers) with the means to participate in their business models. This finding is in line with Chesbrough's (2006) conceptualisation of "open business models", in which the author stresses the importance of having a business model in place that allows organisations to create and capture value through the involvement of several partners outside of the firm, including customers. Our 'social media research approach' does give us the opportunity to take into account the actual content of the interactions between the customer and the firm's employees and infrastructure. By focusing on social media functionalities, we have identified and classified several interaction patterns that firms might use to interact with and mobilize their (potential) customers to develop their business model and - ultimately - create and capture value within the business model. Furthermore, according to our results, we highlighted that the internal organisation of a firm (in business model terms: the firm's infrastructure

management) might be vitally important in making use of the collective intelligence of customers as a resource for (new) value propositions. In line with a key statement of Miles, Miles and Snow (2006) we also observe that a firm's ability to collaborate with external parties such as customers starts from *'being able to collaborate internally'* (Miles *et al.,* 2006, p. 7). The ability to efficiently and effectively cooperate with customers throughout the entire business model by making use of Web 2.0 applications might therefore provide firms with new opportunities for competitive advantage.

7. Conclusion

This research initially aimed to empirically investigate and explore how an organisation's business model can develop under the influence of customer interactions via social media. Subsequently, it was our goal to identify the significance and nature of the potential impact of social media on business models. By using a pattern approach (Alexander, 1979; Schuler, 2008, Rossing, 2012) we were able to discover and group patterns of business models in which social media usage by companies has a significant impact on both the companies' business model components via customer interaction and customer participation. We identified the concept of customer interaction as representing the interaction between the firm and its customers, depending on the initiative of the interaction and the ways in which the interaction is organised. To frame customer interaction in the context of the business model; we identified customer participation as being the extent to which customers interact with the components of the business model. Herein, we were able to identify three levels of business model impact, varying from changes in a single business model pillar to changes all business model pillars. Customer participation is therefore found to be instrumental for social media to have an impact in a firm's business model. In other words, without thoughtful mechanisms that involve customers in a business model, the value of social media might be significantly low or not worth a company's time or investment(s). This notion of 'thoughtfulness' is implicitly referring to Casadesus-Masanell (2010) observation that an organisation's business model is inseparable from a business' strategy, requiring organisations to carefully strategize their social media usage functionality and the role they allow their customers to play in (designing) their current or future business model(s). Furthermore, in the empirical appliance of Kietzmann *et al.*'s (2011) framework of

social media functionality, we found that the *conversations, reputation, groups, sharing, relationships* and *identity* functionalities of social media were used in different combinations to various extents in several components and pillars of the business model. These interactions on social media therefore have impact on an organisation's business model to various extents, depending on the degree of customer participation. Building upon Osterwalder *et al.*'s (2005) business model ontology and Kietzmann *et al.*'s (2011) framework for social media functionality, we have tried to advance the field of business model literature by providing insight into new value creation mechanisms in which a companies' social media usage and participation of customers can play various roles within a business model. In line with Wirtz *et al.*'s (2010) research proposition that Web 2.0 trends and characteristics are *changing the rules of the 'create and capture value game'*, our choice of an empirical setting of a 'Web 2.0 environment' *i.e.* companies' use of social media functionalities to interact with customers gave us the opportunity to observe that the application of social media functionality does indeed have a significant impact on business models and the role of customers therein. Through a cross-case comparison, we were able to group these social media usage functionalities and discover three distinctive business model patterns in which different social media functionality is being used as in instrument for customer participation and, ultimately, business model development and value creation logic.

8. Limitations and issues for future research

This qualitative study explored a sample of nine case-companies that provided us with insight in how companies can develop their business model and create customer and corporate value in a dynamic and turbulent environment, which we characterized as a 'Web 2.0 environment'. Although we selected a sample of case companies that operate in different industries and in two cases even significantly varied in size (the sample included two companies with under 400 fte), they all shared the same important characteristics of having regular and direct customer contact in different phases of the design, production, delivery and after sales of their value propositions. Only two out of nine companies qualified for the *customer-integrated* pattern, which might have a negative effect on both the internal and external validity of this research. However, this limitation is partly attributable to the very nature of qualitative (multiple-) case studies, as this research design is purely aimed at developing novel,

testable and empirically valid theory (*cf.* Yin, 1981). In addition, we have used an extensive four-step coding procedure as proposed by Strauss and Corbin (1998) to carefully analyse the data to integrate and refine the results. Furthermore, although most of the results were emerging from the coding procedure post data-analysis, there is still a risk of bias in the researchers interpretation and categorization of the results due to the fact that we adopted two frameworks a priori (before data-analysis). However, as both frameworks (Kietmann *et al.*'s 2011 honeycomb canvas and Osterwalder *et al.*'s 2005 business model ontology) are relatively widely accepted and frequently used models within business (model) literature, this choice might still be justified after additional analysis of the data.

To conclude this chapter, there are several avenues for future research in response to this research. First of all, there is a need for quantitative studies to test the identified value creating patterns within business models through the use of social media functionality and the different degrees of customer participation. Although both constructs are defined as a result from the data, further research is needed to come up with scales that can actually measure and quantify the extent to which social media functionality and customer participation are present in a business model. Furthermore, there still is the need to measure the true effect of the several identified business model developments on value creation and value capturing. Further empirical research should respond to this by investigating suitable scales for measuring the quantifiable monetary consequences and effects of applying these mechanisms in practice. Third, as this research was conducted in mostly service-oriented companies in a B2C context, further research might focus itself on the functional use and effects of social media in for example a B2B or a product-oriented context to test and compare the results of this research. Furthermore, as we found that the corporate use of social media might have a positive effect on the company's value proposition through increasing customer interaction and customer participation within the business model, it seems worthwhile to explore this further. In that sense, this research advocates further research regarding subjects like crowdsourcing, co-creation and co-innovation where one would go in to more detail regarding the specific techniques (for example on social media) that are used to successfully integrate customers in a product or service offer.

Finally, one could state that our findings regarding customer interaction and customer participation could be easily called in to question. As table 6 shows, our data in table

4 indicated that in cases of low customer interaction we also find low customer participation and so on. In other words, according to our findings there would be no dynamic situation possible where - for example - a high level of customer interaction would result in a low level of customer participation.

Table 6: Corresponding levels of customer interaction and customer participation

Customer participation / **Customer interaction**	**Low**	**Medium**	**High**
Low	X		
Medium		X	
High			X

However, it is important to note that this research solely investigated customer interactions in the context of *social media*. According to our cases, we found that the level of customer interaction via social media interfaces corresponds to the level of customer participation. It is possible that in other ways of interaction between a firm and its customers (e.g. focus groups, customer interviews, telephone contact), the correspondence between customer interaction and customer participation would look different. For future research, it might be interesting to look deeper and more focused into the differences between more traditional ways of firm-customer interaction and interactions on social media. More specifically, it would be worthwhile to explore the differences in the added value these different communication mechanisms might generate for companies.

9. Implications for practice

This research has several implications for practitioners, which might (among others) include C-suite officials, strategists, business developers, (strategy) consultants, business coaches, and entrepreneurs. Our findings suggest that successful business models (*i.e.* business models that are expected to create and capture relatively high amounts of value) are operated by firms that possess the ability to develop their business model through increasing customer participation and social media usage functionality. Ideally, the target scenario might be to strive for a *customer-integrated* business model, as this type of business model is assumed to add the highest value for

companies. Nonetheless, we should be careful with this scenario, as there might also be extensive costs and resources involved depending upon the ways companies might try to increase customer interaction to add value within their business models. However, as most social media interfaces provide relatively low-cost solutions to capture the voices of an enormous collective of customers, using social media functionality might be a viable option for companies.

In this sense, the findings of this research might be used as best practices for business model innovation. To achieve this, we provide practitioners with the basis for developing a roadmap to innovate their business models. Our view upon customer interactions and customer participation within business models might be useful for management to rethink their communication strategies regarding their customers or "social media audience" in general. As we found that the added value of collecting input and customer feedback is highly depending upon internal collaboration, we would recommend companies to critically assess their internal organisation in terms of the dissemination of customer intelligence between customer contact centres and other departments. Here, firms might develop their business models from a *customer-facing* business model design to a *customer-integrated* business model design via the *customer-valuing* business model design by developing their customer relationships according to the identified patterns, allowing and motivating customers to provide the company with their valuable input and feedback, supported by distinct and strategic appliance of social media functionalities. Concerning the practical implementation of this research at companies, our research holds the premise that using the honeycomb framework and the business model ontology (*i.e.* the business model canvas developed by Osterwalder, 2009) might help companies to design, test, implement and further develop their new business model(s). To achieve this, a 'design approach' was developed to help companies actively think about the use of social media within the context of their business models. This approach has already been tested several times within the joint innovation consortium 'New Models for the Social Enterprise' and the results are quite promising. In addition, this research might serve practitioners with the right handles to develop specific strategies for monitoring, understanding and responding to different social media activities within the context of their business model (*i.e.* Kietzmann *et al.*'s "4C" social media guidelines).

Bibliography

- Achtenhagen, L., Melin, L., Naldi, L. (2013). Dynamics of business models – strategizing, critical capabilities and activities for sustained value creation. *Long Range Planning, article in press.*
- Alexander, C. (1979). The timeless way of building. *New York: Oxford University Press.*
- Al-Debei, M.M. and Avison, D. (2010). Developing a unified framework of the business model concept. *European Journal of Information Systems, Vol. 19 (3)*, pp. 359 – 376.
- Amit, R. and Zott, C. (2001). Value creation in e-business, Strategic Management Journal, *Vol. 22*, pp. 493 – 520.
- Amit, R. and Zott, C. (2010). Business Model Innovation: Creating Value in Times of Change. *Working Paper WP-870, July 2010.*
- Babbie, E. (2007). The Practice of Social Research. *12th Edition, Wadsworth Cengage Learning.*
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management, Vol. 17 (1),* pp. 99 – 120.
- Berthon, P., Pitt, L., McCarthy, I., and Kates, S. (2007). When customers get clever: Managerial approaches to dealing with creative consumers. *Business Horizons, Vol. 50 (1),* pp. 39 – 47.
- Brown, T. (2008) Design thinking. *Harvard Business Review, Vol. 86*, pp. 84 – 92.
- Bucherer, E., Eisert, U. and Gassman, O. (2012). Towards Systematic Business Model Innovation: Lessons from Product Innovation Management.

Creativity and Innovation Management, Vol. 21 (2), pp. 183 – 198.

- Brink, J. and Holmen, M. (2007). Why do firms change? The role of business models, sequences of opportunities and changes of capabilities in bioscience firms, *No. 84426-84015*.

- Casadesus-Masanell, R. and Ricart, J.E. (2010). From Strategy to Business Models and onto Tactics. *Long Range Planning, Vol. 43*, pp. 195 – 215.

- Casadesus-Masanell, R. and Zhu, F. (2013). Business Model Innovation and Competitive Imitation: the Case of Sponsor-Based Business Models. *Strategic Management Journal, Vol. 34,* pp. 464 – 482.

- Chesbrough, H. (2006). Open Business Models: How to Thrive in the New Innovation Landscape. *Boston, MA: Harvard Business School Press.*

- Chesbrough, H. (2010). Business Model Innovation: Opportunities and Barriers. *Long Range Planning, Vol. 43*, pp. 354 – 363.

- Constantinides, E. (2008). Survival in the era of the empowered customer: Turning the Web 2.0 menace into a strategic opportunity. *Working paper, University of Twente (NL).*

- Constantinides, E., & Fountain, S. J. (2008). Web 2.0: Conceptual foundations and marketing issues. *Journal of Direct, Data and Digital Marketing Practice, Vol. 9 (3),* pp. 231–244.

- Demil, B. and Lecocq, X. (2010). Business model evolution: in search of dynamic consistency. *Long Range Planning, Vol. 43,* pp. 227 – 246.

- Edmondson, A. C. & McManus, S. E. (2007). Methodological fit in organizational field research. *Academy of Management Review, Vol. 32 (4),* pp. 1155 - 1179.

- Eisenhardt, K.M. (1989). Building Theories from Case Study Research. *The Academy of Management Review, Vol. 14 (4),* pp. 532-550.

- Eisenhardt, K.M. and Greabner, M.E. (2007). Theory building from cases: opportunities and challenges. *Academy of Management Journal, Vol. 50 (1),* pp. 25-32.

- Gordijn, J. (2002). Value-based requirements engineering. Exploring innovative e-commerce ideas. *Doctoral dissertation, Vrije Universiteit Amsterdam.*

- Ho, H.D. and Ganesan, S. (2013). Does knowledge based compatibility help or hurt knowledge sharing between suppliers in coopetition? The role of customer participation. *Journal of Marketing, Vol. 77 (6),* pp. 91 - 107.

- Hoyer, W.D., Chandy, R., Dorotic, M., Krafft, M., Singh, S.S. (2010). Consumer Cocreation in New Product Development. *Journal of Service Research, Vol. 13 (3)*, pp. 283 – 296.

- Ickler, H. (2010). An approach for the visual presentation of business models that integrate web-based collective intelligence into value creation. *Advances in Intelligent and Soft Computing, Vol. 76*, pp. 25 – 35.

- Kim, H.D., Lee, I. and Lee, C.K. (2013). Building Web 2.0 enterprises: A study of small and medium enterprises in the United States. *International Small Business Journal, Vol. 31 (2),* pp. 156 – 174.

- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons, Vol. 53*, pp. 59 – 68.

- Kietzmann, J.H., Hermkens, K., McCarthy, I.P. and Silvestre, B.S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons, Vol. 54,* pp. 241 – 251.

- Kijl. B., Bouwman, H., Haaker, T. and Faber, E. (2005). A dynamic business model framework for emerging mobile services. *ITS 16th European Regional Conference, Porto, Portugal, September 2005.*

- Margretta, J. (2002). Why Business Models Matter. *Harvard Business Review, Vol. 80 (5),* pp. 86 – 92.

- McAfee, A. (2006). Mastering the three worlds of information technology. *Harvard Business Review, Vol. 84 (11),* pp. 141 – 149.

- McGrath, R.G. (2010). Business Models: A Discovery Driven Approach. *Long Range Planning, Vol. 43,* pp. 247 – 261.

- Meszaros, G. (1998). A Pattern Language for Language Writing. *Published in: PLoPD3*, pp. 529 – 574.

- Miles, R.E., Miles, G. and Snow, C.C. (2006). Collaborative Entrepreneurship: A Business Model for Continuous Innovation. *Organizational Dynamics, Vol. 35 (1),* pp. 1 – 11.

- Moeller, S., Ciuchita, R., Mahr, D., Odekerken-Schroder, G. and Fassnacht, M. (2013). Uncovering Collaborative Value Creation Patterns and Establishing Corresponding Customer Roles. *Journal of Service Research, Vol. 16 (4)*, pp. 471 - 487.

- Morris, M., Schindehutte, M. and Allen, J. (2005). The entrepreneur's business model: toward a unified perspective. *Journal of Business Research, Vol. 58,* pp. 726–735.

- Mustak, M., Jaakkola, E. and Halinen A. (2013). Customer participation and value creation: a systematic review and research implications. *Managing Service Quality, Vol. 23 (4),* pp. 341 - 359.

- Ngo, L.V. and O'Cass, A. (2013). Innovation and business success: The mediating role of customer participation. *Journal of Business Research, Vol. 66,* pp. 1134 - 1142.

- O'Reilly, T. (2005). What is Web 2.0? *http://oreilly.com/web2/archive/what-is-web-20.html*

- Osterwalder, A. (2004). The Business Model Ontology: A Proposition in the Design Science Approach. *Unpublished dissertation, University of Lausanne.*

- Osterwalder, A. and Pigneur, Y. (2004). An ontology for e-business models. *In*: Value Creation for E-Business Models, W. Currie, *Butterworth-Heinemann.*

- Osterwalder, A., Pigneur, Y. and Tucci, C.L. (2005). Clarifying business models: origins, present, and future of the concept. *Communications of the AIS 15 (May),* pp. 2 – 40.

- Osterwalder, A. and Pigneur, Y. (2010). Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers. *John Wiley & Sons, Inc., Hoboken, New Jersey.*

- Plé, L., Lecocq, X., Angot, J. (2010). Customer-Integrated Business Models: A Theoretical Framework. *M@n@gement, Vol. 13 (4),* pp. 226 – 265.

- Rodriguez-Donaire, S. (2012). Changing Business Model Dynamics by means of Social Media. *2012 IEEE 6th International Conference on Management of Innovation and Technology, ICMIT 2012, art. no. 6225834*, pp. 370 – 377.

- Rossing, C. (2012). Is Sharing Caring? The value of social media interaction patterns for online news services. *Master Thesis, University of Twente (NL).*

- Schaarschmidt, M. and Kilian, T. (2013). Impediments to customer integration into the innovation process: A case study in the telecommunications industry.

European Management Journal, in press.

- Schuler, D. (2008). Liberating Voices: A Pattern Language for Communication Revolution. *USA: MIT Press.*

- Smets, L.P.M., Langerak, F. and Rijsdijk, S.A. (2013). Shouldn't customers control customized product development? *Journal of Product Innovation Management, Vol. 30 (6),* pp. 1242 - 1253.

- Stock, R.M. (2014). How Should Customers Be Integrated for Effective Interorganizational NPD Teams? An Input-Process-Output Perspective. *Journal of Product Innovation Management, Vol. 31 (3),* article in press.

- Strauss, A.L. and Corbin, J.M. (1998). Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory. *Sage Publications, Inc.*

- Tang, L. and Liu, H. (2011). Leveraging social media networks for classification. *Data Mining and Knowledge Discovery, Vol. 23,* pp. 447 – 478.

- Teece, D.J. (2010). Business Models, Business Strategy and Innovation. *Long Range Planning, Vol. 43,* pp. 172 – 194.

- Venkatraman, N. and Henderson, J.C. (1998). Real strategies for virtual organizing. *Sloan Management Review, Vol. 40 (3),* pp. 33 – 48.

- Von Hippel, E. (1988). The Sources of Innovation. *New York: Oxford University Press.*

- Von Hippel, E. and Katz, R. (2002). Shifting Innovation to Users via Toolkits. *Management Science, Vol. 48 (7),* pp. 821 – 833.

- Von Hippel. E. (2005). Democratizing Innovation. *Cambridge, MA: MIT Press.*

- Wirtz, B.W., Schilke, O. and Ullrich, S. (2010). Strategic Development of Business Models: Implications of the Web 2.0 for Creating Value on the Internet. *Long Range Planning, Vol. 43,* pp. 272 – 290.

- Yin, R.K. (1981). The Case Study Crisis: Some Answers. *Administrative Science Quarterly, Vol. 26 (1),* pp. 58-65.

- Yin, Robert K. (2003). Case Study Research: Design and Methods. *3rd Edition. Thousand Oaks, CA: Sage Publications.*

Appendix A: Semi-structured interview

Introduction of the research motivations and topics

Topic 1: Business Model

Product & Customer Interface

Probes

- Which products/services does the organisation offer?
- For which markets?
- Who are your customers?
- What is their unique selling point?

Infrastructure Management

Probes

- How is the organization structured in terms of employees, technology and resources?
- What are the organization's most important resources/competencies?
- Which partners are involved in the organization's network?
- How intensive are these partnerships and what goals are pursued within these partnerships?

Financial Aspects

Probes

- Which activities or assets require significant costs for your company?
- Could you describe the most important revenue streams for your company?
- Could you describe the pricing strategies at your company?

Topic 2: Customer Participation/Involvement

Probes

- Who are your customers and how often do you talk to them?
- How is customer feedback collected and disseminated within the organization?
- In which business processes do your customers participate?
- Does the customer participate in creating (new) products or (new) services?
- Where in the value chain does the customer participate in the creation of products/services? (e.g. *design, production, delivery, after-sales)*
- How is this participation designed and structured?
- Which actors are primarily involved in interaction with customers? *E.g.* does it only affect front-line employees or does it also influence the tasks of other employees?
- How is customer interaction (regardless of the moment of participation) coordinated within the organization?

Topic 3: Social media usage, getting to know the organization

Goals

Probes

- What are the organization's goals related to using social media?

Interactions

Probes

- How is social media used by your company?
- Which interactions take place? (presence, relationships, reputation, identity, groups, conversations, sharing)

Interfaces

Probes

- What are the most commonly used communication channels on social media?
- Why did the organization choose these channels?

Topic 4: Social media in the BM

The business model as empirical context for the appliance of social media functionalities. In which business activities is social media actively deployed?

Product & Customer Interface

Probes

- How does the organization deploy social media in designing/selling/delivering its products and services?
- Does this differ among market segments the company is active in?

Infrastructure Management

Probes

- What are the consequences of using social media for the organisation's organizational structure, its technological infrastructure and core competencies?
- How is social media deployed with regard to partners? Why (not)?

Financial Aspects

Probes

- How is social media being used with regard to the organisation's pricing strategy?
- Is there any way in which social media usage by the company/customers influences costs related to business activities and the value creation process?

Topic 5: Business model dynamics & social media – ex ante / ex post comparison

Product & Customer Interface

Probes

- Which (significant) changes have recently taken place in the company's product/service offer?
- If so, how might social media have played a role here?

Infrastructure Management

Probes

- Which (significant) changes have recently taken place in the company's organizational/technological (infra)structure and core resources?
- Did the increased use of social media led to the development of (new) core competences? How?
- Which (significant) changes have recently taken place in your value network? How did social media play a role here?

Financial Aspects

Probes

- Which recent (significant) changes have recently taken place in your pricing model? How did social media play a role here?
- Which recent (significant) changes have recently taken place in your cost structure?

Appendix B: Case-specific results of business model development as an outcome of the coding procedures

Business model development (including pattern code)	Companies	Example(s)
Introducing new products/services to the market (BMB1)	Kroodle, Conrad, ONVZ	- Kroodle expanded its one-product range to a range of insurance products which are easy to use - Conrad increased its product range from 50.000 to over 300.000 products - ONVZ developed a fully automated mobile app as a new service towards its customers to claim health insurance costs
Targeting new customer segments (BMB2)	Kroodle, Unive, CZ, ONVZ, VGZ, Timing	- Kroodle does not rely on traditional customer segmentation, rather it focuses on a customer's online behaviour and mindset - By expanding and improving its online sales and service environment and its social media channels, Unive aims to target new customer segments and rejuvenate their customer population. - CZ actively acquires new customers and increases its sales volume by expanding its value proposition to their online sales and service channels - By focusing on online sales and services, VGZ acquires new customers and increases its chances to retain customers, which is pivotal for the largest healthcare insurance company in the Netherlands - ONVZ becomes increasingly less dependent upon intermediaries to sell their insurances as customers prefer direct contact (via the Internet) with the company - As a consequence of the economic crises, Timing decided to strengthen their focus on their B2B customers instead of the hiring of flex workers
Expanding/shifting distribution channels	OHRA, Kroodle, Conrad, Unive, CZ,	- OHRA is actively shifting sales to its online channel - Kroodle uses Facebook as its primary and single customer interface, *i.e.* as a

(BMB3)	VGZ, ONVZ, Reggefiber	sales channel. Without a Facebook account, you cannot buy Kroodle's products and services. - Conrad closed down their brick-and-mortar stores and started selling all their products and services online - Although Unive's offline sales channels are still dominant (150 offline stores), the company aims to increase its online sales up to 50% of total sales in the coming years by expanding its own advanced online sales and service environment - By expanding its value proposition to their new online sales and service channel(s), CZ aims to set-up and strengthen an online sales funnel towards their website - VGZ steers its online channel in order to make it the most dominant sales channel compared to their offline channels (mobile office, call centers) - ONVZ shifted its entire sales and service offer towards its customer segments to an online environment. ONVZ provides its customers with a fully automated way of online claiming their healthcare invoices/costs. Customers can just send in a pdf or a picture of their invoice (also via the mobile app) and after a few controls, customers get paid within two days - Reggefiber invests in steering its online channel(s) at the cost of its more traditional, offline channels. This entails highly functional, project-specific websites and project-specific social media interfaces to engage end-user communities in the company's value proposition
Improving the customer experience (BMB4)*	OHRA, Kroodle, Unive, ONVZ, CZ	- OHRA operates a multi-channel strategy to optimize the customer experience - Kroodle develops its products 'mobile first', enabling their customers to enjoy the best service on their mobile devices - Kroodle introduces social login for its customers to improve the easiness of

		use of their products and services - By centralising its organisation, Unive attempts to build a more uniform sales and service experience for its customers - CZ invested in its online sales and service environment to improve the customer experience - ONVZ invested in its online sales and service environment, including a mobile app, to completely automate its service process for its customers
Increasing customer loyalty (BMB5)*	OHRA, Kroodle, VGZ	- OHRA actively participates in customer dialogues - Kroodle's team is 24/7 available for its customers - VGZ's webcare team always responds within 2 hours after a customer inquiry
Using customers as a resource (BMB6)	OHRA, Kroodle, Reggefiber, VGZ	- To improve retention and user rates of online customers, OHRA actively adapts its online value proposition according to customer feedback - Kroodle challenges its customers to come up with ideas and suggestions regarding its products and pricing model, which might be adapted afterwards - To increase customer input and customer feedback, VGZ has built an online platform to facilitate customers in sharing their ideas related to healthcare issues and VGZ's services - For each building project, Reggefiber involves, activates and engages customers (end-users) in setting-up a campaign by becoming active ambassadors that promote a glass fiber connection to the home in their respective communities
Cutting costs (BMB7)	OHRA, Kroodle, Conrad, VGZ, ONVZ	- OHRA strives for operational excellence by optimizing and expanding its (online) customer services - By using social media as a point of departure in all departments, Kroodle aims to connect to its (potential) customers against relatively low costs - Conrad became a pure sales and marketing company by phasing out its

		high-cost offline stores - Conrad's customers actively help each other out with (technical) issues on several internet forums, without the company having to intervene - By setting-up its online community, VGZ aims to give customers the opportunity to help each other out without consulting VGZ's helpdesk - ONVZ's transition from their old backoffice systems to SaaS will result in an outflow of over 50% of the employees in the IT department
Expansion of pricing model (BMB8)	Kroodle	- Kroodle challenges its customers to come up with ideas and suggestions regarding its pricing model, which might be adapted afterwards - Kroodle's social member-get-member programme provides customers with the opportunity to earn reductions on the cost of their insurances by bringing new customers (new revenue) in
Changes in key activities (BMB9)	Unive, Kroodle, OHRA, Conrad, CZ, ONVZ, Reggefiber	- To improve their products and services, Unive started mapping out 'customer journeys' by structurally logging all relevant online activity - Kroodle structures its customer feedback throughout its entire internal organisation. This way, short feedback loops in the internal organisation are in place that make external communication and information exchange fast and effective - Conrad systematically collects feedback through its own customer (product) review platform. Collected feedback is reviewed by several teams, including Conrad's internal product- and webmanagers, who subsequently adapt their offering according to customer feedback in the form of adding new products, deleting products or rewriting product information. Conrad's review platform collects about 1.000 product reviews a week. - CZ regularly organises customer panels to test their new online sales

		and service environment - ONVZ both collects customer input and customer feedback online and offline. Social media and online advice panels are used to collect data and customer ratings for creating or improving new products or service. Offline interaction with customers is organised in the organisations' "customer arena", where customers are invited to join the company for research or evaluation purposes. Next to that, ONVZ is also involved in qualitative desk research, primarily organised in the marketing department. - Although Reggefiber's main focus is on building and maintaining residential glass fibre networks, it is extensively involved in marketing activities, as part of their revenues come from residents that close deals with service providers (subsequently, a percentage of the revenues go to Reggefiber)
Changes in key resources (BMB10)	Conrad, Kroodle, CZ, VGZ, ONVZ, Reggefiber	- Conrad's full shift to online sales caused the organisation to close down their brick-and-mortar stores and turn into a pure sales and marketing organisation, which led to a significant increase in its product array and of the communications department - Kroodle's business model is entirely driven by its 'mobile-first' approach and social media integration - CZ set-up and heavily invested in a separate 'Online' department with interaction- and visual designers, front- and backend developers and usability experts to expand its online channel and provide customers with the best possible online service. The company also invested in customer experience experts to map customer journeys an learn about customer behaviour (e.g. through usability testing) - VGZ invested in the customer experience on their online channel

		and their online community by setting up a new department called 'channel management' - ONVZ is in the middle of a transition wher its entire backoffice system is phased out and shifted towards new software solutions (SaaS) - ONVZ organises customer feedback sessions in its own "customer arena", which is connected to the marketing department - Reggefiber set-up an Online department to structure its channel-switching effort to online sales and service environments. Each project is assigned to regional marketers and business developers to maximize customer contact on site.
*BMB3 and BMB4 were later merged into one variable: *"developing customer relationships"*		

Appendix C: Case-specific results of social media functionality as an outcome of the coding procedures

Social media functionality	Explanation	Example(s)
Presence	The extent to which users know if others are accessible	- VGZ's online platform allows users to display their availability (in particular moderator users)
Sharing	The extent to which users exchange, distribute, and receive content	- Kroodle set up a member-get-member programme on Facebook to enable its customer to share the company's value proposition (Facebook/website page) and gain financial bonuses in return. This led to more sales transactions and market growth
Relationships	The extent to which users can be related to other users	- Kroodle's social member-get-member programme builds relationships between the firm and its customers and between existing and potential customers - Conrad engages with its (potential) customers by actively building an online audience on several social media interfaces. The company monitors the quality of their relationship-building activities by setting KPI's regarding social media engagement values (e.g. number of likes, comments) - With its social media channels integrated in its online customer community, VGZ aims to further strengthen the relationship not only between the company and its customers, but also between customers themselves by giving them the opportunity to share ideas and experiences with each other
Identity	The extent to which users reveal their identities in a social media setting	- Kroodle uses its customer's Facebook profiles to pre-fill customer data (via social login) in order to rate and sell insurance products and services. Without a Facebook account, you cannot become a customer of Kroodle - VGZ's online community platform requires users to set-up profiles. This will increase the quality of customer contributions (more dedicated users) - Reggefiber actively involves customers on social media as ambassadors to aggregate and stimulate end-user demand for a glass fibre connection to residential homes within (new) project areas. To achieve maximum reach and sentiment, each

		project is guided by an individual social media interface (on Twitter and Facebook)
Conversations	The extent to which users communicate with other users in a social media setting	- OHRA engages in conversations with customers and potential customers on its social media channels to improve their customer services and loyalty - Kroodle is 24/7 available for all customer inquiries on social media. The company also regularly starts up conversations with customers to gain more customer input (e.g. to rate or suggest new product ideas) - Conrad's review platform facilitates conversations between customers (both current and potential customers) to share (and comment on) their opinion regarding Conrad's online product offering - Unive primarily uses its social media channels for webcare and marketing purposes - CZ uses its social media channels for webcare - Timing primarily uses its social media channels for webcare and marketing purposes - VGZ is increasingly engaging in conversations with its customers via their social media channels and their own online community to improve feedback collection and customer input - ONVZ delivers webcare services to its customers and follows a content planning to keep its customers engaged with 'useful news'
Groups	The extent to which users can form communities and sub-communities	- Kroodle actively builds a customer community on Facebook by regularly asking questions or starting contests regarding their current or future value proposition(s) - Conrad has set-up a review platform, which led to the development of a community of customers that systematically review the products they bought (or would buy) in Conrad's webshop. Conrad's review platform collects about 1.000 product reviews a week. In addition, Conrad launched a semi-independent platform aimed at their more 'nerdy' and male clients (ManCave) - VGZ set-up its own online community 'Share it with VGZ', to involve (potential) customers in discussions surrounding issues in the healthcare sector and collect relevant ideas that might improve the organisation's value proposition
Reputation	The extent to which users can identify the standing of others, including	- Kroodle regularly involves its customers in online contests regarding the design of their future products - Conrad structurally monitors activity and sentiment on the Internet and social media in particular regarding their company

	themselves, in a social media setting	- CZ regularly monitors activity and sentiment on social media related to their company - ONVZ regularly monitors activity and sentiment on social media related to their company - VGZ regularly monitors activity and sentiment on social media related to their company - Timing regularly monitors activity and sentiment on social media related to their company - Reggefiber regularly monitors activity and sentiment on social media related to their company - Unive regularly monitors activity and sentiment on social media related to their company

Appendix D: Case-specific findings concerning added value of customer interactions via social media

Added value within the BM	Explanation	Examples
Acquisition of new customers through better (targeted) value proposition(s)	Improvement of targeting of product(s)/service(s) to acquire new customers	- By incorporating customer feedback into new or changed products, Conrad updates its value proposition to improve the targeting of its product range
Improved customer experience	Improvement of distribution channels and (self-service) environments to improve sales and service experience for customers	- CZ, OHRA and ONVZ heavily invested in their online (social media) channels and mobile applications to improve the service experience for its customers - Kroodle improves the ease-of-use of its services by making Facebook its primary customer interface and sales channel
Increased customer loyalty	Increasing dialogue/interaction between the firm and its market to improve customer loyalty	- OHRA is structurally engaged in conversations with customers - Conrad's review platform facilitates the gathering of customer opinions
Organisational learning	Improved learning at both individual (employee) and collective (firm) level through collection of customer input and customer feedback	- Kroodle stimulates (potential) customers to share their ideas regarding its product offering and services - Conrad continuously learns from its customer by assessing product reviews and implementing changes via product management
Increased sales*	Increasing revenue through improved value proposition(s) and the acquisition of new customers	- Kroodle's social member-get-member programme rewards existing customers to bring in new customers
Decrease costs*	Decreased costs through organizational learning	- Conrad phased-out all its offline stores and started an intelligent e-commerce platform

** = hypothesis on added value, not measured as such within the scope of this research*

Appendix E: Social media business model patterns

Pattern structure: Business model building block (BMB) * social media functionality (SF) = added value within the business model (AV)

Company	*BMB*	*SF*	*AV*
OHRA	BMB3, BMB4 BMB5	SF5, SF7	AV2, AV3, AV4, AV5, AV7
Kroodle	BMB1 BMB2 BMB3 BMB4 BMB5 BMB6 BMB7 BMB8 BMB9 BMB10	SF2 SF3 SF4 SF5 SF6 SF7	AV1 AV2 AV3 AV4 AV5 AV6 AV7
Conrad	BMB1 BMB3 BMB8 BMB9 BMB10	SF3 SF5 SF6 SF7	AV1 AV2 AV4 AV7
Timing	-	SF5 SF7	-
VGZ	BMB2 BMB5 BMB6 BMB7 BMB10	SF1 SF3 SF4 SF5 SF6 SF7	AV2 AV3 AV7

Unive	BMB2 BMB3 BMB4 BMB10	SF5 SF7	AV1 AV2 AV4 AV6
Reggefiber	BMB3 BMB6 BMB9 BMB10	SF4 SF5 SF7	AV2 AV4 AV5
CZ	BMB2 BMB3 BMB9 BMB10		AV1 AV2 AV4 AV6
ONVZ	BMB1 BMB2 BMB3 BMB4 BMB7 BMB9 BMB10	SF5 SF7	AV1 AV2 AV4 AV6 AV7