
Value Map: An Innovative Tool for Business Model Innovation

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Abstract: In this paper, we present a modeling framework called “Value Map”. Value Map assists in conceptualization, representation and analysis of value creation and capture processes with the objective of innovating a firm’s business model. We illustrate the applicability of Value Map by means of case study of value creation and capture processes in an online micro-lending platform called www.kiva.org. Data for the case study were gathered through primary and secondary sources and were structured and presented by Value Map. The resulting representations shed light on the motivations of Kiva customers and potential improvement opportunities in Kiva’s business model. To assess the usefulness of Value Map, we conducted an empirical study, in form of three workshops. Overall, the results suggest that Value Map helps business practitioners in understanding and analyzing customer value creation and firm’s value capture processes in a business model innovation undertaking.

Keywords: Business model; business model innovation; case study; design science, Kiva, modeling framework, value creation and capture; value map.

1 Introductions

A business model is defined as a generic platform between strategy and practice, describing the design or architecture of the value creation and capture mechanisms the firm employs (Teece, 2010). According to Chesbrough (2010), while firms invest extensively in technological innovation, they often pay inadequate attention to business model innovation and/or have little, if any ability to innovate their business models. Prahalad and Bettis (1995) assert that a firm’s “dominant logic” (i.e., how the firm creates and captures value) aids the firm in assessing the relevance the information external and internal to the firm. However, due to the “selective” nature of information processing driven by the dominant logic (that is implicit and tacit in most cases), firms will seek information that fits with this logic and steer clear of the conflicting information. This “selection bias” can be regarded as a barrier to business model innovation. To remove this barrier a firm needs to:

- Describe, explain and develop consensus over what constitutes the value creation and capture processes underlying the “as-is” (i.e., actual) business model.
- Identify the improvement opportunities (incremental or radical) in the value creation and capture processes to explore the ways through which it can innovate the “as-is” business model.
- Conceive of and design the “to-be” (i.e., desired) innovative business model based on the identified improvement opportunities.

In the search for providing conceptual and analytical assistance to firms in designing and innovating their business models, the extant research has developed modeling frameworks most notable of which, is the Business Model Canvas (Osterwalder and Pigneur, 2010). Business Model Canvas can serve as a starting point and a conceptual tool to be used in the initial stages of business model innovation. Nevertheless, our research has revealed a number of limitations of Business Model Canvas that hamper its applicability as far as generating the requisite representations of the “as-is” and “to-be” value creation and capture processes is concerned. In Table 1, we briefly outline a number of such limitations.

Table 1 Limitations of business model canvas

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|--|
| <p><i>The linkages between the nine building blocks of a business model are not modeled.</i> Once a business model is represented the canvas per se does not respond to questions such as: Which resources and activities contribute to the creation of which value proposition for which customer segment at what cost and revenue?</p> |
| <p><i>The relative importance of the entities listed in each building block is not modeled.</i> For instance, the canvas does not address questions such as: Which key partners contribute more to the value proposition? Which value propositions are more important for the customers?</p> |
| <p><i>The nine building blocks are not mutually exclusive and collectively exhaustive.</i> For instance, there is an overlap between the “channels” and the “key partners”, i.e., a retail store, which is a distribution channel, can be a key partner. In addition, the product or the service, its functions and features that link the “key resources” and “key activities” to “value propositions” are not modeled in the canvas.</p> |
| <p><i>Non-monetary value capture is not modeled.</i> By modelling the “revenue streams” as the only mechanism for value capture in a firm’s business model, the canvas does not provide the requisite building blocks for modelling the non-monetary value capture central to business models of non-profit organizations and firms.</p> |

In this paper, we present Value Map, as a modeling framework that assists in conceptualization, representation and analysis of value creation and capture processes with the objective of innovating a firm's business model. We also highlight how Value Map addresses the aforementioned limitations of Business Model Canvas by showcasing an application example of Value Map.

This paper is organized in the following way. In Section 2, we elaborate on the methodology we applied to develop the Value Map. We also present Value Map, its modeling constructs and notational elements. In Section 3, we illustrate the applicability of Value Map by means of a descriptive case study (Yin, 2009). The case study reports on the application of Value Map in the representation of value creation and capture processes in the business model of an online micro-lending platform called www.kiva.org (hereafter referred to as Kiva). In this section, based on the insights gained through the application of Value Map, we present a number of strategies that can be devised by Kiva to innovate its business model. Section 4, elaborates on an empirical study we conducted to assess the usefulness of Value Map and compare it with Business Model Canvas. Finally, Section 5 includes our conclusions, limitations of research and our future work.

2 Value Map

In this section we provide the research methodology we applied to develop Value Map, illustrate its applicability and assess its usefulness. We also present the modeling constructs and notational elements of Value Map.

Value Map as a Design Artifact

Value Map was developed following the design science framework proposed by Hevner et al. (2004). Design science addresses research through building and evaluation of artifacts designed to meet an identified business need or a certain problem. In addition to practical relevance, design science research draws on the knowledge base of prior research results and theories from various disciplines. The knowledge base equips the research with theoretical rigor by providing the constructs, models, methods and instantiations required for building a design artifact. It also provides the means for evaluating the developed artifact based on a wide diversity of research validation methods such as qualitative interviews and case studies (ibid).

In our study, the knowledge base is composed of the perspectives from the state of the art on value creation and capture from economics and (service) marketing literature (see for e.g., Bowman and Ambrosini, 2000; Brandenburger and Stuart 1996; Grönroos and Ravald, 2011). Drawing on these insights, we develop a set of theoretically grounded conceptualizations that can represent the underlying logic and the constituent entities of the value creation and capture in business models. The theoretical underpinnings, the underlying conceptualizations as well as the definitions of the key concepts of Value Map are presented in (Golnam et al., 2013; 2014).

To illustrate the applicability of Value Map, we develop representations of the value creation and capture processes in Kiva's business model. The data for the case study was gathered through desk study, interviews and survey questionnaires in the second half of 2013. A variety of secondary data sources including articles such as (Flannery 2007,

2009; Chang and Jackley 2010), websites and blogs were accessed and analyzed, helping us gain a concrete understanding of Kiva's service offerings and its business model. We also gathered primary data from Kiva Lenders through lending teams, as well as a representative of Kiva and a Kiva Community Support Intern.

We evaluated the usefulness of Value Map, by means of an empirical study that constituted three workshops attended by 14 executives and managers various industry sectors, such as automotive parts manufacturing, power generation, pharmaceutical and investment. In this study, we also compared the Value Map with Business Model Canvas. The details of the study and the results are presented in Section 4.

Value Map: Its modeling constructs and notational elements

A generic Value Map is illustrated in Figure 1. This example has been adopted from Golnam et al. (2013; 2014). As shown in Figure 1, Value Map represents customer value, customer value creation, and service provider value capture processes in a business model. This is achieved by making the relationships between the actors (i.e., service provider, organizations in the value network, service customer, etc.) and the properties (service components, service features, value attributes, customer actions, etc.) in a business model. In developing Value Map we have been inspired by the service paradigm (Vargo and Lusch, 2004). Thus, we conceptualize all the offering of a company being product or services as service.

To map *Service Provider* and the other entities in the *Service Provider Value Network* to the *Service Components* we use the RACI (Responsible, Accountable, Consulted, Informed) Matrix. As illustrated in Figure 1, *Service Provider* is responsible for *Service Component 1* and consults *Organization A*. This consultation may reduce the risk of incompatibility between the *Service Components 1 and 2* or ensure the existence of a contingency plan in case an unanticipated scenario arises in the value creation process. *Service Provider* also contributes to the service through *Service Component 4*. Here, *Service Provider* makes sure that *Organization B* is kept informed about the progress. *Service Component 4* provided by *Organization B* may be affected by *Service Component 5*, which is provided by *Service Provider*. Note that these two service components create the *Service Feature 3*. This sheds light on why *Organization B* needs to be kept up-to-date. In principle, *Service Provider* is accountable for correct and thorough provisioning of the service components for which other entities are responsible.

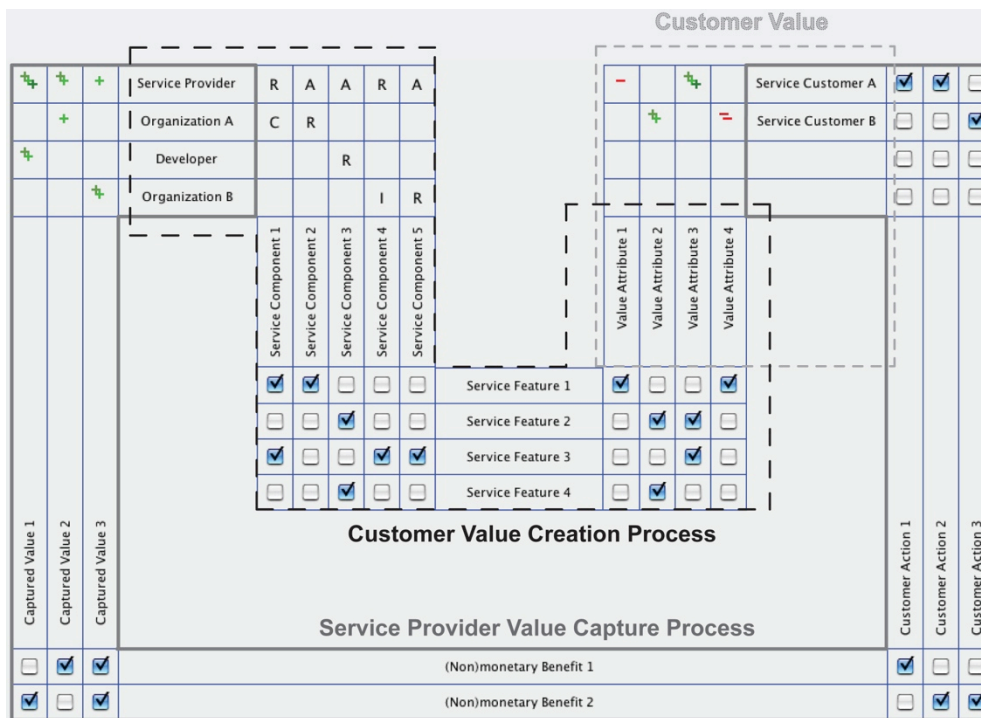


Figure 1 Value Map

Service Components create the Service Features that impact the net perceived customer value (NPCV) (Kotler, 2000; Day, 1990; Huber, 2001) through the Value Attributes. Based on his or her perception of the value of the service offering, the Service Customer takes Actions. These Customer Actions generate the (Non) monetary Benefits for the Service Provider Value Network. These benefits are directly linked to the Value Captured by each of the entities in the value network. In Figure 1, Service Provider and Organization A provide Service Components 1 and 2 respectively. These two components will create the Service Feature 1 that negatively impacts the NPCV for Service Customer A and B through Value Attributes 1 and 4. As shown, the impact is stronger for the Service Customer B. Similarly, Service Provider and Organization B provide Service Components 4 and 5 respectively, thereby creating Service Feature 3. This service feature has a strong positive impact on the Service Customer A's perception of the service value as captured in Value Attribute 3. Service Customer A takes Customer Actions 1 and 2 that contribute to the (Non) monetary Benefits 1 and 2 thereby realizing and contributing to Captured Value 1 - 3 for the entities in the Service Provider Value Network. As shown, Captured Value 1 has a strong and medium positive impact on the net captured value of the Service Provider and Developer respectively. Other sections of Value Map can be interpreted the same way.

3 Representing Value Creation and Capture in Kiva's Business Model

In this section, first, we provide some background information on Kiva and its operations. Then, we report on the application of Value Map to represent value creation and capture

processes in Kiva's business model. Finally, drawing on the Value Map representations, we provide some insights into how Kiva can innovate its business model by bringing about incremental and radical changes in its value creation and capture processes.

Kiva

Kiva (Swahili for unity) is a non-profit online-lending platform launched in 2005 is “the world's first person-to-person micro-lending website, empowering individuals to lend directly to unique entrepreneurs around the globe” (Diamond, 2009). Kiva founders had both grown up sponsoring children in Africa through associated churches, however they wanted to focus on micro-lending rather than donating as it seemed like a “dignified, intellectual, equitable extension that appealed to [them] at [that] point in [their] lives” (Flannery, 2007). They thought, “Instead of benefactor relationships, we could explore partnership relationships” (ibid.).

Kiva allows for individuals in the developed world to loan to individuals in the developing world who don't have access to the traditional banking system, to help them start their small businesses. Kiva works with a network of micro-financing institutions (MFIs) around the world, whom they call Field Partners. They hold the responsibility for screening borrowers, disbursing loans, collecting repayments, and overseeing Kiva loans. As of June 15, 2013, there are 204 Field Partners in 69 countries, across 5 continents, and this network is ever growing (Kiva: Field Partner's Role, 2013).

Kiva can be thought of as a dating website (McMurtry and Huffman, 2010) where individuals can search the profiles of borrowers, read their stories, understand why they need such capital, and choose whom to lend to. Borrowers' stories are inspiring and help us in the developed world get closer to understanding what it means to be in poverty and the difficult pursuit of trying to escape (Flannery, 2007). Flannery (2007, P.31) expresses “the human connections we build between lenders and borrowers have brought new lenders to the microfinance movement, and foster in them a new awareness and connection to the people who briefly use their money. By telling stories, we allow MFIs that lack access to capital markets to efficiently raise money and serve more clients”.

The players involved with Kiva include Kiva Entrepreneurs (entrepreneurs/borrowers in developing countries in need of loan capital), Kiva Lenders (individuals in the developed world who loan at a zero-percent interest rate), Kiva Field Partners (including MFIs and other lending organizations) and Kiva Fellows (who travel to different countries, visit entrepreneurs, and post blogs about their visits, as well as conduct soft audits) (Chang and Jackley, 2010).

A step by step process capturing the details of Kiva's operation and its working routines with field partners, lenders and borrower is illustrated in Figure 2.

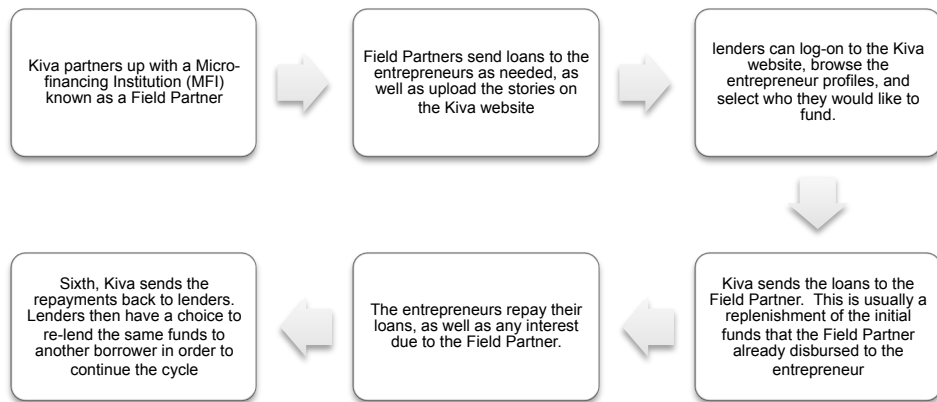


Figure 2 Step by step process of how Kiva works

Modeling value creation and capture in Kiva’s business model

The desk study results and the secondary data gathered were synthesized to develop an understanding of Kiva’s business model, its constituent elements, the operational details of Kiva’s services, etc. As transparency is a key principle in Kiva, a substantial amount of information is shared by Kiva through its website and blogs. This information helped us in developing the survey questionnaire and the interview questions. Our secondary research also shed light on possible sources for primary data gathering. Value Map models of value creation and capture processes in Kiva’s business model were developed following the five-step process in Figure 3. In this section we elaborate on each step.

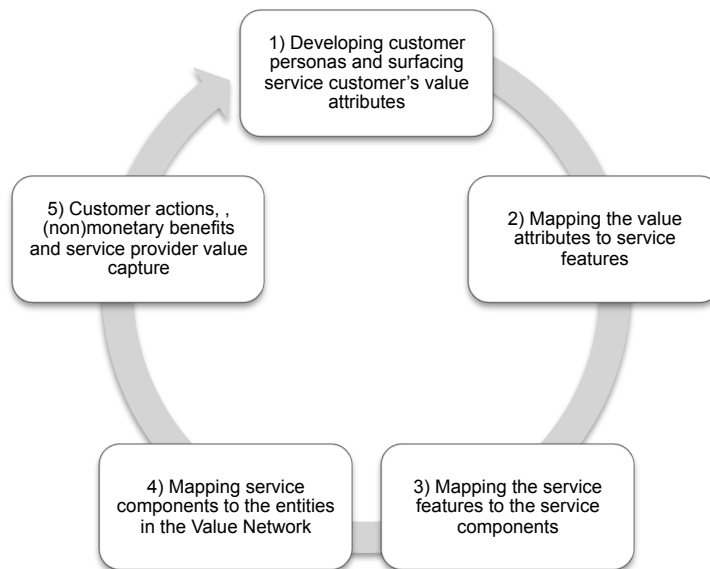


Figure 3 Five-Step Process to develop a Value Map representations of the value creation and capture processes in a business model

1) *Developing customer personas and surfacing service customer's value attributes*

This step entailed an iterative process in which customers' perceptions of the costs and benefits of Kiva's services (i.e., service customer's value attributes) were elicited and surfaced through the survey questionnaire. As the value attributes were identified customer personas were developed and refined iteratively. Broadly speaking, two customer segments are present in Kiva's business model: the lenders and the borrowers.

Table 2 Kiva's service customers' personas

| <i>Kiva's Service Customers Personas</i> | |
|--|---|
| Margie | Margie is a 70-year-old widow. She is passionate about Kiva's mission and dedications. She is not a wealthy person, but has more than she needs. Margie loans through Kiva because she loves the feeling of connection with the borrowers on Kiva. She loves to read about the descriptions of the borrowers, and feels that with the assets she is not using, she can help provide tangible assistance to people with real-life needs. She feels that by lending through Kiva, she is supporting those who struggle to meet their family needs, and to support those around the world who have much less than they really need. Margie believes in the Chinese proverb, "Give a man a fish, and you feed him for a day; show him how to catch a fish, and you feed him for a lifetime." She believes this is exactly what Kiva enables her to do. Margie is also a part of various Lending Teams. As a member of Lending Teams, Margie feels as if she is part of a greater community. Other lenders in a team influence her to support loans that she may not choose herself. This helps expand her awareness and extend her reach. |
| Marc | Marc is in his early 30s. He was introduced to Kiva but the "Stuff You Should Know" Podcast. Marc believes that Kiva is a great way to give back. Not only does logging-in through his Facebook account make Kiva easy to access, but their website design makes Kiva easy for him to use. Marc loves that he can choose the loan amount and can take the money out of Kiva if he ever needs to. He is confident in Kiva and appreciates the transparency they display. Marc prefers Kiva's model to the charity model, because unlike donating money to a charity, the money he loans on Kiva comes back to him so that he can continue to help more and more people with his repayments. Marc also likes the fact that he doesn't have to pay a transaction fee, but always donates to Kiva's operational costs so that he can continue helping others. Whenever Marc makes a loan on Kiva, he always shares it on his Facebook account so that his friends and family can see what he has been up to. Through Marc's sharing activities, more friends and family have since joined Kiva. |
| Patrick | The third persona is Patrick. With a growing interest in social involvement, his friend, Marc, recommended Patrick to use Kiva's services. For Patrick's special occasion, Marc thought it would be a nice idea to give a Kiva (gift) card to Patrick. Patrick was so inspired during the process of searching for a cause he felt for, and engaging in the loan process, that he decided to create his very own Kiva account. This way he could continue to be involved in helping others achieve their personal and professional goals in the developing world. |

The second author of the article was already registered as a lender on Kiva's platform and was a member of a few lending teams and thereby had participated in a number of lending projects. This enabled us to post the survey questionnaire in eight lending teams and gather over 350 responses to the questionnaire. However, due to the structure of Kiva's business model, it was not possible to gather primary data on the borrowers, the

other customer segment in Kiva's business model. In fact, the field partners i.e., the local MFIs are the contact point between the borrowers and Kiva. Thus, the direct contact between lenders and borrowers is not possible. As far as developing insights into Kiva's business model was concerned, we gathered secondary information on the borrowers through Kiva blogs. However, when it comes to developing an understanding of the borrowers' perceptions of Kiva services, direct contact with borrowers is deemed indispensable. Due to this limitation, we limited the scope of our analysis to only one group of Kiva's customers, the lenders. In Table 2, we present the three customer personas we identified: Margie, Marc and Patrick.

Figure 4 depicts the customer personas identified and their corresponding value attributes. We adopt a phenomenological perspective in understanding the customer's perception of the costs and benefits of the service. Therefore, value attributes are recorded and presented in the customer's vocabulary. In Figure 4, we derived the value attributes from the statements written by the respondents in the survey. As illustrated, some value attributes can have negative and positive impacts on the net perceived customer value. For instance, Margie is really happy about the sense of belonging to a community of lenders on Kiva and is frustrated by the facts that she can't communicate directly with the borrowers and she can't track the progress of the projects she funds. By the same token, Marc's perception of Kiva's services are positively impacted by some technical aspects such as logging with Facebook account (that frees him from the burden of creating a new account on Kiva) and, ease of navigation on Kiva's website. At the same time, he is dissatisfied with the fact that he can't filter projects by some criteria and lack of customized reporting tools on Kiva's website. As you can see these technical value attributes are not as important for Margie.

| | | | | | | | | | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------------------------|
| | | | | | | | | | | | | | | | | | | Margie (Lender) |
| | | | | | | | | | | | | | | | | | | Marc (Lender) |
| | | | | | | | | | | | | | | | | | | Patrick (Marc's friend) |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| "I can see the borrower's faces and learn about their lives." | | | | | | | | | | | | | | | | | | |
| "I can log-on with my Facebook account." | | | | | | | | | | | | | | | | | | |
| "I can easily navigate in Kiva website." | | | | | | | | | | | | | | | | | | |
| "I can loan a small amount of money." | | | | | | | | | | | | | | | | | | |
| "I can share my activity with my friends and family." | | | | | | | | | | | | | | | | | | |
| "There are plenty of projects to choose from." | | | | | | | | | | | | | | | | | | |
| "I will get my money back." | | | | | | | | | | | | | | | | | | |
| "I belong to a community." | | | | | | | | | | | | | | | | | | |
| "I can give Kiva (gift) cards to my friends and family." | | | | | | | | | | | | | | | | | | |
| "I can easily pay online." | | | | | | | | | | | | | | | | | | |
| "I can receive Kiva (gift) cards from my friends and family." | | | | | | | | | | | | | | | | | | |
| "I now have a platform where I can help people help themselves." | | | | | | | | | | | | | | | | | | |
| "There is no direct communication between lenders and borrowers." | | | | | | | | | | | | | | | | | | |
| "I can not track the progress of the projects I fund." | | | | | | | | | | | | | | | | | | |
| "The defaulted loans should be better reported on." | | | | | | | | | | | | | | | | | | |
| "There are no search filters." | | | | | | | | | | | | | | | | | | |
| "Loans expire after 30 days on Kiva." | | | | | | | | | | | | | | | | | | |
| "There are mediocre causes (e.g., funding a plasma TV)." | | | | | | | | | | | | | | | | | | |

Figure 4 The three customer personas and their corresponding value attributes

2) Mapping the value attributes to service features

Features are the emergent properties of a service observed by the service customers. In other words, service features are the interface between the service customers and the service provider’s value network, connecting the technical side of the service design and implementation to the soft side of customer perceptions about the service. In this step, we try to understand the relationship between the features of Kiva’s service and the value attributes of Kiva’s customers.

As shown in Figure 5, a service feature can impact multiple value attributes positively or negatively. For instance, the feature “around 2,700 loans available per month” results in the existence of a broad choice for the lenders and at the same time may reflect the fact that there are mediocre causes such as buying a plasma TV among the projects. This feature can thus impact the perceptions of the customers both positively and negatively. Moreover, sometimes a feature while providing certain benefits presents some limitations to the customers. For example, the “Website with cutting edge technology” feature results in easy navigation, the ability to see the borrower’s picture and project information and the possibility of online payments. Yet at the same time the website does not allow for tracking the progress of the projects and filtering search results.

| | "I can see the borrower's faces and learn about their lives." | "I can log-on with my Facebook account." | "I can easily navigate in Kiva website." | "I can loan a small amount of money." | "I can share my activity with my friends and family." | "There are plenty of projects to choose from." | "I will get my money back." | "I belong to a community." | "I can give Kiva (gift) cards to my friends and family." | "I can easily pay online." | "I can receive Kiva (gift) cards from my friends and family." | "I now have a platform where I can help people help themselves." | "There is no direct communication between lenders and borrowers." | "I can not track the progress of the projects I fund." | "The defaulted loans should be better reported on." | "There are no search filters." | "Loans expire after 30 days on Kiva." | "There are mediocre causes (e.g., funding a plasma TV)." |
|--|---|--|--|---------------------------------------|---|--|-------------------------------------|-------------------------------------|--|-------------------------------------|---|--|---|--|---|-------------------------------------|---------------------------------------|--|
| Borrower's background, story, images, etc. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Team lending | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Gift Cards | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Connect to Kiva with Facebook | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Website with Cutting Edge Technology | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Online payments | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Around 2,700 loans available per month | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Project Info and Needed Credit | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 99% repayment | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Loan amount of \$25 + | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Figure 5 Mapping the value attributes to service features

3) Mapping the service features to the service components

Completing this step requires an understanding of resources and capabilities leveraged in the design and implementation of the service. In practice, not all the resources and capabilities emerge in a service provider’s offering, and therefore only certain resources and capabilities can be linked to or mapped onto the service offering (Bowman and

Ambrosini, 2000). We refer to the manifestations of such resources and capabilities as service components.

Figure 6, depicts the components of Kiva's service. As stated these components can be resources or capabilities of the service provider and the entities in its value network. In the Kiva's case, social networking application programming interface (that enables interconnectivity with Facebook) and projects supplied by borrowers or entrepreneurs are instances of services that are service components. On the other hand, website design is a capability endowed by Kiva.

| Electronic Funds Transfer | Website design | Social Network Application Programming Interface | Platform for lending | Projects | Micro-credit | Providing project information | |
|-------------------------------------|-------------------------------------|--|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Borrower's background, story, images, etc. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Team lending |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Gift Cards |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Connect to Kiva with Facebook |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Website with Cutting Edge Technology |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Online payments |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Around 2,700 loans available per month |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Project Info and Needed Credit |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 99% repayment |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Loan amount of \$25 + |

Figure 6 Mapping the service features to the service components

4) Mapping service components to the entities in the Value Network

Finally, we specify which entities are involved in provisioning the service components and what form their involvements take. To sum up, the four-step process outlined, captures the customer value (Step 1) and customer value creation process (Steps 2-4). As explained earlier, the primary information for step one was gathered by means of the survey questionnaire. The information in steps 2-4 are mainly derived from the desk study and the interviews. The only exception here is understanding customer actions which requires primary source of information.

Figure 7, depicts the mapping between the entities in Kiva's value network and the service components. As shown, Kiva is accountable for the service in its entirety and provisions a component like website design with external help. At the same time, the borrowers provide information about themselves to Field Partners who pass this information to Kiva. Volunteers at Kiva then sort and format the information to present it

on Kiva’s website. Therefore the capability to provide project information is jointly created by the four entities in the value network.

| | | | | | | | |
|---------------------|---------------------------|----------------|--|----------------------|----------|--------------|-------------------------------|
| Kiva | A | A | A | A | A | A | A |
| Volunteers | | | | | | | R |
| MFI (Field Partner) | I | | | R | | R | R |
| Facebook | | | R | | | | |
| PayPal | R | | | | | | |
| Borrower | | | | R | R | I | R |
| | Electronic Funds Transfer | Website design | Social Network Application Programming Interface | Platform for lending | Projects | Micro-credit | Providing project information |

Figure 7 Mapping service components to the entities in the Value Network

| | | | | | | | | | | | |
|-------------------------|-------------------------------------|--|--|---|------------------------------|-------------------------------------|--------------------------|-------------------------------------|--|-------------------------------------|-------------------------------------|
| Margie (Lender) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Marc (Lender) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Patrick (Marc's friend) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | Shares activity on Facebook | Loans / uses the value of the Kiva gift card | Writes reactions / motivations & other discussions on blogs or lending teams | Draws lenders attention to certain causes | Loans a sum at or above \$25 | Create a team | Join a team | Buys a Kiva gift card | Lenders get repaid and are inclined to make another loan | Creates Kiva account | Fill out Kiva email questionnaire |

Figure 8 Customer actions

5) *Customer actions, (non)monetary benefits and service provider value capture*

To understand the mechanisms through which the service provider can capture a part of the value it created for the service customers, we should gain insights into the possible courses of actions that can be taken by the service customer(s).

Figure 8 depicts the actions taken by the customer personas identified in Step 1. These actions are relative to the perceptions of the customers about the benefits and costs of the service offered. Based on Marc’s strong positive perception of logging-in to Kiva with his Facebook account, he shares his Kiva activity on Facebook. Marc has also bought a Kiva gift card, and gave it to his friend, Patrick. Patrick was thus able to extend a loan to the value of the gift card.

As an active community participant, Margie likes to share her reactions, motivations and start or partake in other discussions, either on blogs or lending teams. Margie also likes to draw the attention of other lenders to certain causes. She feels she is able to influence other team members to support a certain project, just as other lenders have an influence on her. She has also created a new lending team where other lenders who share the same values have been welcome to join. Marc also joined a team, but is unfortunately not as active a participant as Margie. Like all Kiva lenders, Marc loans a sum at or above \$25. He was excited about getting repaid, and was inclined to make another loan, thus continuing the lending loop. Patrick was so inspired after using the Kiva gift card that he decided to create a Kiva account. Margie received an email from Kiva, inviting her to fill out a Kiva questionnaire.

| | Job morale (i.e., feeling they have achieved interconnecting developed and developing worlds) | Increase in potential lenders and borrowers | Greater inclination to sponsor Kiva | Revenue from interest accruing | Revenue from expired Kiva (gift) cards | Increase in potential revenue from donations | | Loans / uses the value of the Kiva (gift) card | Writes reactions / motivations & other discussions on blogs or lending teams | Draws lenders attention to certain causes | Loans a sum at or above \$25 | Create a team | Joins a team | Buys a Kiva (gift) card | Lenders get repaid and are inclined to make another loan | Creates Kiva account | Fills out Kiva email questionnaire |
|-------------------------------------|---|---|-------------------------------------|-------------------------------------|--|--|--|--|--|---|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--|-------------------------------------|-------------------------------------|
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | User feedback | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Increased recognition / visibility of Kiva | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Positive user word of mouth | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Group discussion of similar interests, expanding awareness | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Kiva (gift) Cards are purchased | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Potential increase in activity through the Kiva site | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Projects are funded | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Figure 9 Customer actions, (non)monetary benefits and the value captured by the service provider

As shown in Figure 9, the customer actions will create (non)monetary benefits for the service provider and its value network. For instance, the customer actions of creating and joining a team result in increasing the awareness of Kiva users and thereby can increase the potential lenders and borrowers on Kiva's platform. For instance, when both lenders and borrowers see the success of Kiva, they are more inclined to be a part of Kiva. Additionally, when there are discussions concerning Kiva on blog posts on the Internet, this may increase potential lenders to join Kiva.

Similarly buying gift cards will boost the user base for Kiva as well as create some revenues for Kiva when a gift card expires. As another example, Kiva's visibility increases as more projects are funded on its platform and this can help Kiva attract sponsors and donations. Finally, although Kiva does not receive any interest from the loans made, the revenue comes from the accrued interest in the Kiva bank account. As the loan volume grows in Kiva's account from the funds received daily, the amount of money that sits in Kiva's account also grows, even though Kiva sends the funds to the field partners daily. However, most of the Kiva users do not withdraw their funds from Kiva's account even after repayment, thus the amount of money sitting in the account grows too. When projects are funded, this also has a direct link to the increase in potential

revenue from the donations. Kiva lenders may choose to donate to Kiva’s operational costs at the check out screen, after choosing projects to fund. According to a Kiva community support member, 60-70% of Kiva’s operational costs are covered by lender donations, and the additional 30-40% comes from corporate sponsorships and grants obtained by the Kiva development team. In Figure 10, we show the relative importance of the value attributes for the entities in Kiva’s value network.

| | | | | | | |
|---|---|---|---|---|---|---------------------|
| + | + | + | + | + | + | Kiva |
| + | | | | | | Volunteers |
| + | + | | | | | MFI (Field Partner) |
| | + | | | | | Facebook |
| + | + | | | | | PayPal |
| | + | | | | | Borrower |
| Job morale (i.e., feeling they have achieved interconnecting developed and developing worlds) | | | | | | |
| Increase in potential lenders and borrowers | | | | | | |
| Greater inclination to sponsor Kiva | | | | | | |
| Revenue from interest accruing | | | | | | |
| Revenue from expired Kiva (gift) cards | | | | | | |
| Increase in potential revenue from donations | | | | | | |

Figure 10 Value captured by the service provider value network

Insights into business model innovation at Kiva

Based on the understanding gained from the Value Map we propose two approaches that can be invoked to formulate strategies for business model innovation at Kiva.

1) *Removing/weakening the value attributes that impact the perceptions of Kiva’s customers negatively and strengthening or reinforcing the value attributes that impact the perceptions of Kiva’s customers positively.*

These strategies can be materialized by putting in place new service features or improving the existing ones. For instance, regarding the negative value attributes, an advanced search feature (as an improvement to Kiva’s website) can help Marc filter the projects based on his criteria, submitted through a query. In addition, an entrepreneurial credibility index (a new service feature) can be devised and put into place to avoid mediocre causes on Kiva that may negatively impact the perception of the lenders about the overall quality and urgency of the projects posted by borrowers. As an example with respect to the positive value attributes, Kiva can improve the repayment rate of the loans, increase the number of projects available (both achievable through formulating

implementing policies), integrate application programming interfaces (APIs) from other social networking platforms, etc.

The changes to the configuration of the service features are realized by designing/acquiring the new or reinforcing/improving the existing service components. These novelties may require changes in the lineup of the entities in Kiva's value network. For instance, Amazon.com can be added as a participant to Kiva's value network by providing the service component of relational database service (RDS) or simple database (Simple DB), resulting in advanced search as a service feature and filtering search results as the corresponding value attribute. Or Twitter can collaborate with Kiva by having its API integrated in Kiva's website.

2) Reverse engineering the desirable captured value.

Kiva can reverse engineer the value it desires to capture by conceiving the benefits it aims to derive and the actions that lenders should take to generate these benefits. Once this understanding is gained, Kiva can design the corresponding service components and features that can create the value attributes resulting in the customer actions desired by lenders.

The first approach to formulate business model improvement strategy, initiates from the right side of Value Map and transitions to the right side. The second approach, on the other hand, initiates from the left side of Value Map and cycles around. The first approach results in incremental innovation while the second one can bring about innovations that are radical in nature.

4 Empirical Study

In this section we elaborate on the empirical study we conducted to evaluate the usefulness of Value Map and compare it to Business Model Canvas, one of the most established methods for business model design.

In the empirical study, we organized three workshops attended by 14 participants from Iran. The participants belonged to various industry sectors, such as automotive parts manufacturing, power generation, pharmaceutical and investment. They all held executive and senior management positions in their companies and had a minimum of 8 years of experience.

Structure of the empirical study

The first workshop lasted for 6 hours. In the first part of this workshop, we discussed business modeling and problem structuring in organizational decision processes. We also explained the theoretical concepts such as value creation and capture in business models. Then, we familiarized the participants with business model canvas and its nine building blocks. In the second workshop that also lasted for 6 hours, we presented the Value Map, its underlying theoretical perspectives along with an application example. The participants were then divided in four groups. Each group decided on a business idea. The groups represented their business ideas first with the business model canvas and then the Value Map. We acted as facilitators during the sessions and answered to the participants' questions. When the models were completed and presented by the groups. During the presentation of the models, we provided feedback on the models to each group.



Figure 11 Photos from the modelling sessions and the models developed by the participants

The third workshop was held a week after the second workshop lasted for three hours. We had asked the participants to reflect upon the usefulness, practicality and the potential merits of the Value Map and its positioning with respect to the Business Model Canvas. In the workshop, which lasted nearly 3 hours, we debriefed the participants. Some of them had tried to apply the Value Map in their organizations and shared their experiences with us. Some pictures from the workshops and the models developed by the participants are shown in Figure 11.

Results of the empirical study

As stated earlier Business Model Canvas represents the business model by nine building blocks: key partners, key activities, key resources, value propositions, customer relationships, channels, customer segments, cost structures and revenue streams. In Value Map, we represent an additional building block to the ones conceptualized by the Business Model Canvas, namely: product/service offer features. By modeling customer actions and the non-monetary benefits Value Map also allows for modeling free business models of organizations such as Kiva. Finally, the systemic process underlying the Value Map logic avoids overlaps, redundancies, loopholes and missing links. Thereby, making the categories conceptualizations mutually exclusive. The feedback structure i.e., allowing for the transition from the supplier side to the customer side and vice versa in

Value Map results in the collectively exhaustive nature of the categories of concepts Value Map embodies. This feedback structure is particularly significant when it comes to modeling multi-sided platforms such as Kiva, in which two groups of inter-related customers interact. Lack of the systemic feedback reduces the efficiency of linear models in conceptualizing business models. Finally, Value Map models the interconnections between the building blocks of a business model, whereas the Business Model Canvas just aims at identifying these building blocks.

The participants either strongly agree or agree that these additions are useful and/or necessary for representing an organization's business model. The participants also concluded that the Value Map can complement and augment the Business Model Canvas by representing the necessary building blocks of business model of an organization and their inter-relations.

Table 3 summarizes some of the opinions of the participants on the potential merits and the improvement opportunities identified with the application of the Value Map. We write the exact statements of the participants as elicited and recorded in the third workshop.

Table 3 Summary of the opinions of the workshop participants on the merits and the improvement opportunities of the Value Map

| <i>Merits</i> | <i>Improvement opportunities</i> |
|--|--|
| Useful in competitor analysis , understanding the needs of customers | Seems too complicated and scientific. |
| Helps in viewing the value from the customer's perspective, design the product features based on the value they create for the customers and configure the product components based on the cost and benefits associated with them. | High-level of detail that can be boring for the upper level management |
| Can be applied in and is useful for cross-functional teams | Understanding how to read the map can take some time and requires some facilitation |
| Provides a comprehensive 3-dimensional (provider, product/service/, customer) view of value creation and capture | It should be presented section by section to help the audience gain a better understanding of the overall method |
| Useful for organizational diagnosis and product/service improvement | A quantification of the qualitative concepts to accompany the Value Map is required |

To sum up, the participants found Value Map a useful visualization tool that can contribute to the decision processes that require competitor analysis, understanding customer needs and preferences and the features of the product or service that needs to be designed or improved to meet and fulfil the customer needs. Some of the participants stated that the Value Map can be of great value for cross-functional teams and when applied for organizational diagnosis. The discussions with the participants also revealed a number of improvement opportunities in terms of adding a quantitative model, simplifying the graphical representation, and parsimony of the conceptualizations.

The participants also commented on the relationship between the Value Map and the Business Model Canvas. They were unanimous that the representations created by Business Model Canvas can be used as an input to the Value Map. In other words, the Value Map makes explicit the relationships between the building blocks of a business model represented in the Business Model Canvas.

Conclusions

In this paper we presented Value Map as graphical modeling method that aids in conceptualization and representation of value creation and capture in business models. Value Map is grounded in the theoretical insights from economics, management science and (services) marketing literature, drawing principally upon work from the past two decades on value creation and capture, including theories, frameworks, constructs, and other models. We illustrated the usability and applicability of our framework by modeling value creation and capture in www.kiva.org, an online micro-financing platform.

Value Map helped us uncover reasons as to why Kiva users feel inclined to use Kiva in the first place, and their intrinsic motivations behind doing so. Value Map also helped us in understanding how the lender's value attributes can translate into captured value for Kiva. We looked at what value Kiva brings to the users, including the lender and the borrower, and how they facilitate in value co-creation. Value Map also helped us in identifying a number of improvement opportunities in Kiva's business model that can result in the increase in the creation of value for the customers and thereby the value captured by Kiva.

This research suffers from a number of limitations. We used a single case study to illustrate the applicability of the Value Map. Despite the extensive data gathering from multiple secondary sources (Kiva is well-studied company and there are plenty of secondary sources available that enable data triangulation), and access to primary sources of data through interviews and surveys, this single case does not provide an adequate basis for establishing a warranted belief about the applicability of Value Map. Thus, in our future work we will develop our models based on more and preferably prospective business cases. This will definitely result in a better assessment of the practicality and relevance of representations generated using Value Map.

The second limitation of this research concerns the empirical study we conducted to evaluate the usefulness of the Value Map. The fact that all the participants in the survey were from Iran and the relatively small sample size limit the generalizability of the findings of our research. To tackle this limitation, the same study should be conducted among executives and managers from different countries. To ensure an accurate evaluation, the participants should have knowledge about the research context, the Value Map and Business Model Canvas, the alternative methodology with which we compared the Value Map. Thus, we believe the study should be conducted in form of workshops in which the participants are familiarized with the methodologies and attempt to apply them to develop a business model. In the empirical study we conducted, we included participants that belonged to different industries. Therefore, the sample size although relatively small, featured representatives from different industries. This heterogeneity of the participants can positively contribute to generalizability of the study results.

Thus, in conclusion, with the aid of the Value Map framework, we have been able to visually represent value creation and capture in Kiva's business model. Looking at Kiva's service components and service features, we see how these bring value attributes to the customers, thus enabling them to take actions, which in turn bring non-monetary benefits to Kiva, enabling them in turn to capture value. With the help of the Value Map framework incorporating the empirical data gathered from interviews and other sources, the end result is that apart from the improvement opportunities noted, Kiva has developed a business model which should prove viable over the long-run.

References

- Bettis, Richard A., and Coimbatore K. Prahalad. "The dominant logic: Retrospective and extension." *Strategic management journal* 16, no. 1 (1995): 5-14.
- Bowman, Cliff, and Veronique Ambrosini. "Value creation versus value capture: towards a coherent definition of value in strategy." *British Journal of Management* 11, no. 1 (2000): 1-15.
- Brandenburger, Adam M., and Harborne W. Stuart. "Value based Business Strategy." *Journal of Economics & Management Strategy* 5, no. 1 (1996): 5-24.
- Chang, V., and Jackley, Jessica. "Kiva and the Power of a Story". Reference no. M325. Stanford Graduate School of Business, 2010.
- Chesbrough, Henry. "Business model innovation: opportunities and barriers." *Long range planning* 43, no. 2 (2010): 354-363.
- Day, George. S. "Market driven strategy: processes for creating value," *Journal of Marketing*, vol. 55, pp. 116-122, 1990.
- Diamond, Bob. "Kiva is the world's first person-to-person micro-lending website." Retrieved 04 23, 2013 from examiner.com: <http://www.examiner.com/article/kiva-is-the-world-s-first-person-to-person-micro-lending-website>.
- Flannery, Matt. "Kiva and the birth of person-to-person microfinance." *Innovations* 2, no. 1-2 (2007): 31-56.
- Flannery, Matt. "Kiva at four (innovations case narrative: Kiva)." *innovations* 4, no. 2 (2009): 31-49.
- Golnam, Arash, Vijay Viswanathan, Christa Isolde Moser, Paavo Ritala, and Alain Wegmann. "Value Map: A Diagnostic Framework to Improve Value Creation and Capture in Service Systems," in *Second International Symposium Business Modeling and Software Development, BMSD 2013*, Noordwijkerhout, the Netherlands, 2013.
- Golnam, Arash, Vijay Viswanathan, Christa Isolde Moser, Paavo Ritala, and Alain Wegmann. "Designing Value-Oriented Service Systems by Value Map," in *Third International Symposium on Business Modeling and Software Development, BMSD 2013* Noordwijkerhout, the Netherlands, July 2013 Revised Selected Papers, 2014, p. 150 -173.
- Grönroos, Christian, and Annika Ravald. "Service as business logic: implications for value creation and marketing." *Journal of Service Management* 22, no. 1 (2011): 5-22.
- Huber, Frank, Andreas Herrmann, and Robert E. Morgan, "Gaining competitive advantage through customer value oriented management," *Journal of Consumer Marketing*, vol. 18, pp. 41-53, 2001.
- von Alan, R. Hevner, Salvatore T. March, Jinsoo Park, and Sudha Ram. "Design science in information systems research." *MIS quarterly* 28, no. 1 (2004): 75-105.
- Kiva: How Kiva Works, The Long Version. <http://www.kiva.org/about/how/even-more>. accessed May, 2013.
- Kiva: Field Partner's Role. <http://www.kiva.org/about/risk/field-partner-role>. accessed May 2013.
- Kotler, Philip. *Marketing management*, millennium ed, 2000.

Kvale, Steinar, and Svend Brinkmann. *InterViews: Learning The Craft Of Qualitative Research Interviewing*. Sage, 2008.

McMurtry, Dave, and Huffman, Brent. "Kiva Documentary: What Did They Do With My \$25 Loan?" <http://vimeo.com/10076318>. accessed May, 2013.

Osterwalder, Alex, and Pigneur, Yves. *Business model generation: A handbook for visionaries, game changers, and challengers*. New York: Wiley, 2010.

Teece, David J. "Business models, business strategy and innovation." *Long range planning* 43, no. 2 (2010): 172-194.

Vargo, Stephen L., Robert F. Lusch. "Evolving to a new dominant logic for marketing," *Journal of marketing*, pp. 1-17, 2004.

Yin, Robert K. *Case study research: Design and methods*. Vol. 5. Sage, 2009.